ATTITUDES OF ELEMENTARY CLASSROOM TEACHERS TOWARD ELEMENTARY GENERAL MUSIC: THE EFFECTS OF CERTAIN ASPECTS OF PRESERVICE TRAINING

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This is to certify that the

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ABSTRACT

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By

Thomas W. Tunks

Purpose

This study had three distinct purposes: (1) to construct and validate an instrument to measure attitudes toward the value of elementary school general music, suitable for use in this study and elsewhere; (2) to determine how seeing videotaped elementary music classes affects the attitudes elementary classroom teachers have toward the value of elementary school general music; (3) to determine how sectioning classes according to music achievement level affects the attitudes of students enrolled in a music fundamentals course for preservice elementary teachers.

Procedures

The attitude scale was based upon Guttman's facet theory of attitude scale construction. It was entitled Attitude Behavior Scale - Elementary General Music (ABS-EGM). Scale development procedure included gathering opinions

of classroom teachers toward elementary school general music, construction of items, reliability checks, and validity checks. Several revisions of items were made following preliminary administrations. Reliability (.91) was based on Hoyt's internal consistency measure. Validity was determined by the known-group method.

Twenty-four sections of Music 135, a music fundamentals course for Elementary Education majors at Michigan State University, were employed in determining the effects of the independent variables. The Colwell MAT, Tests I and II, were used to form sections of high music achievers, sections of low music achievers, and heterogeneous sections. The videotape treatment was randomly assigned to half of the sections on each music achievement level. A counterbalanced design was used in an effort to minimize teacher effect. The ABS-EGM was administered during the final week of the course to measure the dependent variable. Class means were used as units of observation.

Data were analyzed using a two by three factorial design with ANOVA. The level of significance was set at .05. Analysis was performed using the CDC 6500 computer at Michigan State University.

Findings and Conclusions

The findings of this study are subject to certain limitations. The sample used represents a finite population--Elementary Education majors at Michigan State

University. The series of videotapes used in this study is specific in nature and is not necessarily representative of any other videotape series. The use of any written attitude scale poses certain limitations in that respondents must be relied upon to reply truthfully.

Certain conclusions were drawn based upon the findings of this study:

1. The ABS-EGM is a suitable instrument for measuring attitudes of Elementary Education majors toward the value of elementary school general music.

2. In music fundamentals classes for Elementary Education majors, placing students in sections of homogeneous music achievement level has no significant effect on their attitudes toward the value of elementary school general music.

3. In music fundamentals classes for Elementary Education majors, using videotapes of elementary music classes has no significant effect on their attitudes toward the value of elementary school general music.

4. After having taken a fundamentals of music course, students with a high level of music achievement do not differ significantly from students with a low level of music achievement, with respect to attitude toward the value of elementary school general music.

5. Viewing videotapes of elementary music classes may have a more positive effect on students in high music

achievement sections than on students in low sections, with respect to attitude toward the value of elementary school general music. The results of this study do not indicate a significant difference, but further study is warranted.

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By

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To Betsy

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CHAPTER I

OVERVIEW OF THE PROBLEM

Purpose

This study had three distinct purposes: (1) to construct and validate an instrument to measure attitudes toward the value of elementary school general music, suitable for use in this study and elsewhere; (2) to determine how seeing videotaped elementary music classes affects the attitudes elementary classroom teachers have toward the value of elementary school general music; (3) to determine how sectioning classes according to music achievement level affects the attitudes of students enrolled in a music fundamentals course for preservice elementary teachers.

Background of the Problem

In elementary education, the most widespread system of instructional setting in use today is that of the self-contained classroom. This system makes stringent demands of the elementary teacher. To expect that all teachers will have sufficient skills to fill the needs of all students in all areas of study is unrealistic. Although most subjects can be handled well enough at the elementary

level, some specialized areas, perforce, present unique problems. Included among these areas are music, art, foreign languages, and physical education.

With regard to music instruction, three types of teaching arrangements are found: those in which all music is taught by a music specialist; those in which all music is taught by a classroom teacher; and those in which music instruction is shared between classroom teacher and music specialist. Still another condition exists in a growing number of Michigan and U. S. classrooms--no music instruction.

Whether music is taught by the classroom teacher or a music specialist, the classroom teacher's attitude toward the value of elementary school general music is important to the success of the program. Strong teacher support of a music program can affect administrative decisions in such matters as personnel, curriculum, and the purchase of equipment. A teacher's enthusiasm or lack of it concerning music can also directly affect students' attitudes and experiences. For example, a recent informal study showed that approximately 17 percent of Michigan classroom teachers actually teach music, 23 percent lead music activities of some sort, and about 60 percent do nothing educationally substantial with music.[1]

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[1]R. G. Sidnell, private interview concerning an informal, unpublished study completed at Michigan State University, October 31, 1972.

A recognized goal of music courses for preservice elementary teachers is the promotion of positive attitudes toward the value of music instruction in the education of the young. Among the factors that may be of importance to the formation of these attitudes are (1) successful personal experience with music and (2) viewing children in successful music experiences. If these two factors are, in fact, instrumental in the formation of positive attitudes, it is the responsibility of music educators to include them in the education of elementary teachers.

In music courses for preservice elementary teachers, sectioning students according to their level of music achievement is one possible way of increasing the likelihood of their having successful personal experiences with music. When placed in homogeneous sections, high achievers can progress at a faster rate without waiting for lower achievers to master skills or concepts. Low achievers can progress at their own pace without the constant threat of much of the class being more adept at completing required tasks. In addition, performing before others of like ability may be less threatening for low achievers than performing before those who obviously have more advanced skills.

On the other hand, it is possible that students in sections of mixed music ability feel more successful in classroom musical experiences. High achievers can help

lower achievers gain musical skills, thus enhancing their own feelings of success. Low achievers not only can use higher achievers as models, but can appraise their own musical gains, with higher achievers as a basis for comparison.

Another possibility in mixed classes is that high achievers will feel successful and low achievers will not. Inversely, low achievers may feel more successful than higher achievers because, even though they started at a lower level, they may feel they have gained more.

One purpose of this study was to measure the attitudinal effects of sectioning students in a music course for preservice elementary teachers according to music achievement. This could be accomplished by a two step process. The first step would be to determine whether students feel more successful in music classes when grouped with others of about the same ability level. The second step would be to determine whether having successful music experiences affects students' attitudes toward elementary school general music. If being grouped with others of about the same ability level affected students' feelings of success in music experiences, and if having successful music experiences affected students' attitudes about elementary school general music, then it could be inferred that being grouped with others of about the same ability level would affect students' attitudes toward elementary school general music.

This process involves measuring not only attitudes toward elementary school general music, but also students' self-perceived success in music experiences. It was decided, therefore, to avoid the problems of measuring self-perceived success, and to determine directly the effects sectioning has on students' attitudes.

Another purpose of this study was to measure the effects of using a videotaped series of elementary music classes in a music course for preservice elementary teachers. The videotapes are of actual music classes being taught by an experienced music teacher and provided students with the opportunity to view children in successful music experiences. Since the term "successful" is subjective, let it suffice that the videotaped sessions have been deemed successful classroom episodes by the Music Education faculty at Michigan State University. There are six videotapes, each of which approximates forty minutes in length.

Of interest was the possibility that students who view the videotapes as a part of the course develop more positive attitudes toward the value of elementary school general music than those who do not. Of course, an increase in the musical experience of those students not seeing the videotapes may, in itself, create more positive attitudes about music in general, and consequently about its value in the elementary classroom.

To ascertain the value and viability of providing these and other experiences in music courses for

prospective teachers, music educators need two types of information: knowledge of attitudes of students entering a course; and knowledge of attitude changes resulting from the course itself. With this information courses and learning experiences can be planned and revised in both structure and content to achieve maximum efficiency in bringing about desired results.

Another purpose of this study was to construct and validate an instrument specifically designed to measure attitudes toward the value of elementary school general music. An instrument of this sort was needed. To date, a relatively small portion of research in music education has dealt with the investigation of attitudes and attitude measurement. Furthermore, a review of doctoral researches in this area reveals that the common practice is for researchers to develop an attitude scale for the project at hand, generally without a sound rational base and without regard to external validity. Consequently, there remains a paucity of attitude scales which are suitable for use by the music educator. Notable among exceptions is the Oregon Test for Attitude Toward Music, developed by Kate Hevner and Robert Seashore.[2]

It would be inappropriate for the purposes of this study to use a scale of attitude toward teaching music,

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[2]K. Hevner and R. Seashore, Tests for Attitude Toward Music, in Studies in College Teaching, I, No. 3 (Eugene: University of Oregon Publications, 1934), 83-151.

because not all classroom teachers participate in music teaching. It would be equally inappropriate to use one of the many existing scales of attitude toward music in general, of music preference, or "love of music" because of the lack of construct validity. Consideration must be given to the make-up of attitudes about the specific area of concern--the value of general music in the elementary curriculum. Too often, researchers have determined scale content without formulating a working theory of the music attitude construct.

A viable alternative to this practice lies in the facet technique of attitude scale construction first proposed by Guttman in 1959[3] and revised by Jordan in 1968.[4] This technique[5] offers a sound a priori basis for determining content and can be used in constructing attitude scales concerning any subject area. The Guttman-Jordan technique, to be described in Chapter II, was employed in the construction of the attitude scale designed as part of this study. The scale is entitled Attitude Behavior Scale--Elementary General Music, hereafter referred to as ABS-EGM.

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[3]Louie Guttman, "A Structural Theory for Intergroup Beliefs and Action," American Sociological Review, XXIV (1959), 318-328.

[4]John E. Jordan, Attitudes Toward Education and Physically Disabled Persons in Eleven Nations (East Lansing, Michigan: Latin American Studies Center, Michigan State University, 1968).

[5]Not to be confused with Guttman's Scalogram Analysis Technique.

Hypotheses

The study was designed to test six hypotheses regarding students in a music course for preservice elementary teachers. These are:

Hypothesis I: Students in sections employing a series of videotapes of elementary music classes will finish the course with more positive attitudes toward the value of elementary school general music as measured by the ABS-EGM than will students who are in sections not employing such tapes.

Hypothesis II: Students in sections that are homogeneous with respect to music achievement will finish the course with more positive attitudes toward the value of elementary school general music as measured by the ABS-EGM than will students who are in heterogeneous sections.

Hypothesis III: Using videotapes of elementary music classes in homogeneous music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in heterogeneous music achievement sections.

Hypothesis IV: Using videotapes of elementary music classes in low (homogeneous) music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in high (homogeneous) music achievement sections.

Hypothesis V: Using videotapes of elementary music classes in low (homogeneous) music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in sections of heterogeneous (high and low) music achievement.

Hypothesis VI: Using videotapes of elementary music classes in heterogeneous (high and low) music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in high (homogeneous) music achievement sections.

Definitions

Certain terms which are uncommon or potentially ambiguous appear in these chapters. For the purposes of this study they are defined as follows:

Attitude--Guttman defines attitude as a "delimited totality of behavior with respect to something."[6] This definition includes all forms of behavior in the make-up of any given attitude, as opposed to those theories which define attitude as a predisposition for certain behavior. The adoption of this definition is central to the theory of attitude measurement employed in this study.

Facet theory--A theory of attitude construct first proposed by Guttman in 1959[7] and revised by Jordan in 1968[8] which serves as the rational base for a corresponding technique of attitude scale construction. This theory centers around the belief that attitudes, rather than being unidimensional, are multi-faceted and are manifested at many levels of personal involvement or commitment. Guttman's facet theory is discussed in detail in Chapter III.

Elementary general music--Music taught in the elementary school as a class, by the classroom teacher, a music specialist, or both. Since the content and emphasis of these classes vary among school systems and even among

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[6]Louie Guttman, "The Problem of Attitude and Opinion Measurement," Measurement and Prediction Edited by S. A. Stouffer (Princeton: Princeton University Press, 1950).

[7]Guttman, "Theory for Inter-group Beliefs," p.318-28.

[8]Jordon, op. cit.

classes within a single school system, this definition includes any class dealing with some combination of music listening, music performance, creative activities, and cognitive information about music or musicians. This does not include beginning instrumental instruction, often offered in upper elementary grades.

Music specialist--Any teacher with training specifically designed to prepare him or her to teach music in the elementary school, and employed by a school system to teach elementary music.

Music course for preservice elementary teachers--Any college course designed to acquaint with the fundamentals of music all students who are enrolled in an elementary education curriculum. The course used in this study was Music 135, a required music fundamentals course for all elementary education majors at Michigan State University. The course meets five hours per week for one term, or approximately ten weeks. Music 135 is not a methods course. The best description of any course lies in the expressed goals. In this case there are four:

1. To perceive, sort, and classify aural musical phenomena.
2. To become familiar with verbal labels, facts, and knowledge bits needed for literacy and communication about music.
3. To display a few incidences of informal music performance skills.

4. To become aware of music as a valuable tool in educating children and a few appropriate teaching strategies.[9]

Music achievement--The mastery of skills necessary to perform music or to perceive, sort and classify aural musical phenomena. In this study, music achievement criteria are those measured by the Colwell Music Achievement Tests, Test I, Parts 1 and 3, and Test II, Part 2.[10]

Major Assumptions

This study accepted the following as valid assumptions:

1. It is possible to measure attitudes verbally with a written attitude scale. According to Guttman's facet theory of attitude construct, adhered to in this study, verbal behavior is a valid indicator of attitude because behavior, including verbal behavior, is an integral part of the make-up of any given attitude. Differences in the observable manifestations of an attitude are differences of degree, not of kind.

2. The typical student who has taken a music course for preservice elementary teachers has, by the time of course completion, formulated attitudes toward the value

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[9]Robert G. Sidnell and Charles M. McDermid, Fundamentals of Music for Classroom Teachers: A Listening Approach (Dubuque, Iowa: Kendal/Hunt Publishing Company, 1972), p. viii.

[10]Richard Colwell, Music Achievement Tests (Chicago: Follett Educational Corporation, 1969).

of elementary general music, and these attitudes are of sufficient strength and specificity to be measurable.

3. The instrument designed and methods employed in this study are adequate and suitable to the purposes of the study. (See Chapter III for information relative to the criterion instruments.)

4. The sample employed in this study is representative of the population of students enrolling in the required music course for elementary education majors at Michigan State University. (Music 135.)

Limitations

The study dealt with only one component of the classroom triad--the prospective classroom teacher and his, or her, attitudes toward the value of elementary general music. Neither the child nor the music specialist were studied. It is recognized that all three components of the classroom triad and their interaction are of importance to the success of an elementary general music program. It is further recognized that the attitudes of the prospective classroom teacher are not necessarily the same as those of the actual, practicing classroom teacher.

The study examined only two factors in the formation of attitudes toward the value of elementary general music--class sectioning according to music achievement, and viewing videotapes of music classes. There are many other factors, both known and unknown, which affect the

formation of these attitudes. It is recognized that the formation of attitudes is a life-long process which is continuous and ongoing. The effects of a ten week music course may be insignificant in affecting permanently the attitude formation which has taken place in the average Music 135 student for eighteen years.

The series of videotapes used in this study is specific in nature and is not necessarily representative of any other videotape series. The results, therefore, of this study regarding the use of videotapes must be generalized with caution, as they cannot be regarded as necessarily indicative of results that might be obtained using any other videotape series.

The use of any written attitude scale poses certain limitations in that the cooperation of the respondent in replying truthfully must be relied upon. Effort was made to avoid such limitations, but complete confidence in respondents' truthfulness can never be justified.

Study Procedure

1. A Review of the literature was conducted in the areas of music specialist and classroom teacher roles, music training and classroom teacher attitude, and attitude measurement, particularly Guttman's facet theory.

2. Standardized instruments for measuring music achievement were examined, and the Colwell MAT, Test I, Parts 1 and 3, and Test II, part 2, were selected for use.

3. The ABS-EGM was developed for measuring the dependent variable--attitude toward the value of elementary general music. Items were constructed based on responses to a questionnaire concerning elementary general music which was given to elementary teachers in the central Michigan area. The scale was administered to several music classes not involved in other aspects of the study. Based on the results obtained, the scale was then revised and readministered to other music classes not involved in other aspects of the study. Reliability and validity checks were completed.

4. For each of three successive terms, eight sections of Music 135 were included in the study. Involved in the study were four teachers, each of whom taught two sections of Music 135 per term. A design was employed which allowed each teacher to be assigned to one class employing each possible combination of the independent variables--low achievement classes with and without videotapes, high achievement classes with and without videotapes, and heterogeneous (high and low achievement) classes with and without videotapes. Each teacher, then, taught a total of six classes.

5. On the first day of each term the music achievement test was administered and students were sectioned according to the results. Heterogeneous sections also were given the test to minimize the possibility of students' knowing than an experiment was taking place.

6. The ABS-EGM was administered to each class during the final week of class time.

7. The resulting data were tabulated, analyzed, and interpreted.

8. Conclusions and recommendations were drawn.

CHAPTER II

SURVEY OF THE RELATED LITERATURE

Literature seeming pertinent as a background to this study falls into three general categories: music specialist and classroom teacher roles; music training and classroom teacher attitude; and attitude measurement, particularly Guttman's facet theory. Discussion of the literature reviewed will proceed in that order.

Music Specialist and Classroom Teacher Roles

Central to the rationale of this study is the fact that classroom teachers' attitudes toward the value of elementary school general music are, indeed, of importance. That teachers' attitudes toward any subject are important to the child seems self-supporting.

Bruner, in discussing the role of the elementary school teacher, states that "the teacher is not only a communicator but a model." He goes on to say, "Somebody who does not see anything beautiful or powerful about [a subject area] is not likely to ignite others with the intrinsic excitement of the subject."[1]

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[1]Jerome S. Bruner, The Process of Education (New York: Random House, Inc., 1960), p. 90.

In agreement with this view, writers in the fields of education and music education have stated that a major way in which attitudes are influenced is modeling or learning by imitation.

> The research on modeling tells us that if we would maximize subject matter approach tendencies in our students we must exhibit those behaviors ourselves. In other words, we must behave the way we want our students to behave.
>
> Although a display of interest and enthusiasm is not enough to guarantee that the students will come to display similar feelings, the probability is certainly greater that this will happen than if we display apathy and disinterest.[2]

Nye and Nye have applied this concept to music education.

> The attitudes and values of teachers are highly important in the instructional process. The chance remarks of a teacher might have a lasting influence on a child. The teacher's attitude toward music, with its great variety of values and uses in human life, will usually affect children's valuing more than formal class presentations on learning to value.[3]

Classic among researches reporting empirical evidence of the effects of modeling are those described by Rosenthal.[4] One such experiment was cited to illustrate that attitude change due to modeling does not necessarily depend on verbal communication.

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[2]Robert Mager, Developing Attitude Toward Learning (Palo Alto: Fearson Publishers, 1968), p. 63.

[3]Robert Nye and Vernice Nye, Music in the Elementary School, 3rd edition (Englewood Cliffs: Prentice-Hall, Inc., 1970), p. 77.

[4]Robert Rosenthal, Experimenter Effects in Behavioral Research (New York: Meredith Publishing Co., 1966).

The study was conducted in a reformatory for women in which inmates were permitted to have their babies. There were over fifty babies, seventy percent of whom were less than one year old. Part of the feeding schedule was for the babies to be given orange juice half the time and, on alternate days, tomato juice. Often the babies preferred one of these juices and disliked the other. The number of orange juice drinkers was about the same as the number of tomato juice drinkers. It turned out that the juice preferences of the babies matched closely those of the people who fed them. When the feeder disliked one type of juice, the baby was more likely to dislike the corresponding juice. When the babies were reassigned a new feeder who preferred the type of juice opposite to the one preferred by the baby, the baby changed its preference to that of its new feeder.[5]

In enumerating the implications of this and similar studies, Rosenthal states, "Perhaps the most compelling and most general implication is that people can engage in highly effective and influential unprogrammed and unintended communication with one another..."[6]

Swanson, in discussing the importance of the elementary classroom teacher to elementary school music programs, speaks for music educators in general.

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[5] Ibid., p. 118.

[6] Ibid., p. 402.

> Music educators responsible for the program believe that the active interest of the classroom teacher is essential to the promotion of an adequate program of music in the elementary school...[7]

Support for Swanson's conclusion becomes evident upon observation of the teacher training activities of music educators. Expressed goals of music courses for prospective elementary classroom teachers often include the promotion of positive attitudes.

Not untypical of such courses is Music 135, offered by the Music Education Department at Michigan State University. In the preface to the required course text some indicative statements about teacher attitudes are made.

> By involving you as listeners, performers, creators and thinkers with and about music, we hope to convince you of the place music might have in the educational experience of children...we hope to shape some rather favorable attitudes regarding music. Primarily, we believe elementary teachers should carry away something positive in beliefs regarding music as an important force in the education of the young.[8]

In summary of the literature discussed thus far, it can be said to support the assumptions that elementary classroom teachers' attitudes are important to the success of elementary school general music programs, that this importance is recognized by music educators, and that music educators are interested in the promotion of positive attitudes about the value of elementary school music.

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[7]Bessie R. Swanson, Music in the Education of Children (Belmont: Wadsworth Publishing Co., Inc. 1969), p. 15-16.

[8]Sidnell and McDermid, A Listening Approach, p. viii.

Another matter of interest is the amount of active participation in music in which classroom teachers are engaged. Although there is currently no literature indicating how much music teaching is being done by classroom teachers throughout the United States, studies of certain specific locations offer some indication of recent trends.

Evans,[9] in gaining information about certain musical attitudes and activities, administered a questionnaire to 371 teachers who graduated from the Elementary Education Program of State University Teachers College, Cortland, New York, during the years 1951 through 1956. These teachers were employed primarily within public schools in New York State. Results indicated that the teachers were teaching 42 percent of the music in their classrooms.

In a study of classroom teachers' opinions regarding their role in the elementary music education program, Picerno[10] employed a method similar to that of Evans. Questionnaires were sent to 495 teachers, randomly chosen from the 1069 elementary education alumni who graduated between 1962 and 1965 from the State University of New York College at Cortland. Again, the majority of the teachers were

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[9]Carl Evans, "A Study of Factors Affecting the Attitude of the Elementary Classroom Teacher Toward Teaching Music." (Unpublished Doctoral Dissertation, Northwestern University, 1958).

[10]Vincent J. Picerno, "Opinions of Classroom Teachers: A Study of Their Role in the Elementary Music Education Program," Journal of Research in Music Education, XVIII, No. 3 (Fall, 1970).

employed in New York State. There were 229 returns, totaling 46 percent.

Of the respondents, 73 percent indicated that they taught some music in their classrooms and 25 percent indicated that they did not. In addition, the teachers felt that an average of 29 percent of music teaching was done by classroom teachers and 62 percent was done by music specialists. Picerno's method of rounding off individual teachers' responses to units of five or ten percent before averaging them accounts for the total being less than 100 percent.

Picerno reports that about 83 percent of the classroom teachers were in favor of having the classroom teacher teach some music. Most of the teachers were in favor of having music specialists do some of the more specialized music instruction and help coordinate the music program.

In an earlier study Picerno[11] polled music supervisors of New York school systems in order to determine their opinions concerning the role of classroom teachers with regard to music teaching. Questionnaires were sent to music supervisors of approximately 50 percent of all local school systems in New York State having elementary schools--355 out of 710. There was a total response of 264 systems or 74 percent. Responses indicated that the

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[11]Vincent J. Picerno, "The Role of the Elementary Classroom Teacher and the Music Specialist: Opinions of the Music Supervisor," Journal of Research in Music Education, XVIII, No. 2 (Summer, 1970).

music specialists represented use 87 percent of the time allotted to music. Although 71 percent of the music supervisors favored having classroom teachers teach part of the music, results indicated that only 39 percent of the classroom teachers actually did.

McQuerry,[12] studying the status of elementary music specialists in California Public Schools, sent questionnaires to all elementary and unified school districts in the state, a total of 424 school districts. There were 296 returns, or 70 percent. Of the school districts responding, only about one-half reported that they employed music specialists for their elementary music programs, indicating that either the classroom teachers taught all the elementary music in the other half of the districts, or that those districts had no music instruction at all. In addition, only 34 percent of the responding districts employ enough music specialists to make a ratio of one teacher to five, or fewer schools. This indicates that even of the school systems employing music specialists, many have so few that either the classroom teachers must do some of the music teaching, or the amount of time spent on music instruction is very small.

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[12]Lawrence H. McQuerry, "The Status of Elementary Special Music Teachers in California Public Schools," Journal of Research in Music Education, VII, No. 4 (Winter, 1969).

In a study of the classroom music program in the elementary schools of Utah, Chugg[13] sent questionnaires to teachers, principals, and music supervisors throughout the state. On the basis of the questionnaires and personal interviews with educators and representatives of the State Department of Public Instruction, certain rather broad conclusions were drawn. Of these conclusions, two are of interest here: Most school districts in Utah are not providing enough music specialists to meet the needs of the classroom teacher and pupil; and classroom teachers in Utah have the potential of making a significant contribution to the musical experiences of their pupils.

Klein[14] sent questionnaires with checklists of music activities to 483 recently certified elementary teachers in all sections of Tennessee. A total of 276 questionnaires was returned. One of the most significant findings of the study was that less than 10 percent of the participants in the study had the services of a music specialist to do some of the music teaching. Furthermore, of the music activities on the checklist, over 50 percent were used only a few times a year.

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[13]Melburn D. Chugg, "A Study of the Classroom Music Program in the Elementary Schools of Utah." (Unpublished Doctoral Dissertation, University of Utah, 1964).

[14]Arthur Klein, "Elementary Teachers' Judgements Regarding the Adequacy of their Music Preparation." (Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1955).

Studying the status of in-service programs for teacher preparation in elementary general music in Colorado, Craig[15] sent questionnaires to music supervisors, general music specialists, and classroom teachers throughout the state. Replies were received from 61.3 percent of the music supervisors, 65.3 percent of the music specialists, and 87.6 percent of the classroom teachers. Responses indicated that nearly two-thirds of the responding districts did not have an in-service music program. Of the districts with in-service programs, more than one-half had a music supervisor. The most successful in-service programs were found in districts which encouraged teacher participation in planning and evaluating music activities. Across the state there was an increasing tendency to replace the classroom teacher with a music specialist when assigning responsibility for music instruction.

A major problem with these, as with all questionnaire studies, is the lack of total response. Results can be said to be representative only of the respondents, in some cases a low percentage of the sample being studied. Often, the portion of the sample which fails to respond is that which could provide valuable information to the researcher. In any case information resulting from a response of less than 100 percent can not be regarded as unbiased.

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[15]William James Craig, "The Status of In-Service Education for Elementary General Music in Colorado," (Unpublished Doctoral Dissertation, University of Colorado, 1969).

The problem of response notwithstanding, it can be concluded that there is a general lack of consistency with regard to the role of the elementary classroom teacher in teaching music. This adds support to the assumption that when considering attitudes of prospective classroom teachers, it is not sufficient to consider only how they feel about teaching music.

Even classroom teachers who do teach music and enjoy teaching music may not believe that it is of any real value in the elementary curriculum. Teacher expectancy of the benefits students will derive from any particular activity may have an effect on the benefits that actually are derived. Rosenthal,[16] reporting on the teacher expectancy effect, cites a study in which teachers were informed that on the basis of a test which could predict academic "blooming," certain students could be predicted to "show unusual academic development." The teachers were given names of students in their own classes who were expected to do unusually well during the school year. In actuality, the students had been randomly selected and there was no reason to believe that they would progress any faster than the remaining students. At the end of the school year students' gain scores in IQ points for the year were compared. Results indicated that the students whom teachers expected to "bloom" academically actually gained significantly more than the others.

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[16] Rosenthal, op. cit., p. 410.

In summary, from the data available regarding music specialist and classroom teacher roles, it was concluded: empirical data and expert opinion support the assumption that the classroom teacher's attitudes toward music in the elementary school are important in shaping the attitudes of children; a great deal of variety exists regarding the amount of music taught by the classroom teacher; even when the classroom teacher teaches no music at all his or her attitudes toward music in the elementary school are influential to the attitudes of children.

Music Training and Classroom Teacher Attitude

In the majority of studies dealing with music training for prospective elementary teachers emphasis has been placed upon cognitive gain and acquisition of musical skills. In discussing these studies only findings and conclusions regarding attitude will be presented.

Slagle,[17] investigating the effects of seven methods of instruction on the achievement of Elementary Education majors at Middle Tennessee State University, also considered attitude toward music. The seven methods were: (1) lecture-discussion with no direct performing experience; (2) lecture-discussion with emphasis on singing experience; (3) lecture-discussion with emphasis on piano and singing

[17]Harold Clayton Slagle, "An Investigation of the Effect of Seven Methods of Instruction on the Musical Achievement of Elementary Education Majors." (Unpublished Doctoral Dissertation, University of Illinois, 1967).

experience; (4) lecture-discussion with emphasis on ukulele, piano, and singing experience; (5) lecture-discussion with emphasis on ukulele and singing experience; (6) lecture-discussion with emphasis on flutophone and singing experience; and (7) what Slagle describes as the "traditional method of instruction which was primarily lecture-discussion supplemented by singing and playing."

Six experimental groups and one control group were used. Each group was a freshman Fundamentals of Music class for Elementary Education majors. The instructional period consisted of two class sessions per week for thirteen weeks.

Slagle reports that a more positive attitude toward music was observed in the group taught by method two (singing). All the other groups' attitudes toward music were observed to decline during the course of the study, even though all groups made significant skills gains.

Another study comparing methods of teaching fundamentals of music to preservice classroom teachers is that of Fulbright.[18] Two methods were compared, one a lecture-discussion approach, the other an activities approach employing singing and playing autoharps, melody bells and pitch pipes.

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[18]Helen Floyd Frances Fulbright. "A Comparison Between Two Methods of Teaching Music Fundamentals to Pre-Service Classroom Teachers." (Unpublished Doctoral Dissertation, University of Kentucky, 1970).

Two classes of Elementary Education majors at Morehead State University, Morehead, Kentucky were used as experimental and control groups. Treatment was for approximately two and one-half hours per week for twelve weeks. Comparison of pretest with posttest scores indicated that the activities approach class (experimental group) gained significantly more than the other class in musical skills. However, based on a self-constructed attitude inventory, Fulbright reports no difference in attitude between the two groups.

Although an extensive review of the literature yielded no study concerning attitudes of preservice elementary teachers toward the value of elementary school general music, four studies were found to deal with areas which were sufficiently related to make them of central importance to this discussion. Birch[19] studied classroom teachers' attitudes toward music in general, while Eby[20] Evans,[21] and Gelineau[22] were all concerned with attitudes toward the teaching of music by classroom teachers.

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[19]Lawrence W. Birch, "Factors Related to Differences in Classroom Teachers' Attitudes toward Music." (Unpublished Doctoral Dissertation, University of Southern California, 1969).

[20]Jane M. Eby, "The Relationship Between Selected Factors Concerning Elementary Education Majors and Their Achievements in Specified Music Fundamentals Classes." (Unpublished Doctoral Dissertation, Indiana University, 1969).

[21]Evans, op. cit.

[22]Ruth Phyllis Boak Gelineau, "Factors Influencing Attitudinal Variation Among Classroom Teachers in the Teaching of Music." (Unpublished Doctoral Dissertation, University of Connecticut, 1960).

The purpose of Birch's study was to determine not only classroom teachers' attitudes toward music, but the relationships between attitude, previous experience, and self-confidence in music teaching. The criterion instrument used to measure attitude was the Oregon Test for Attitude Toward Music.[23] In addition, a biographical questionnaire and a self-confidence scale were developed for use in the study. Of the 420 booklets distributed to elementary teachers, 318, or about 76 percent, were returned.

The data were analyzed using correlation and multiple regression techniques as well as tabulation of percentages of respondents choosing each answer. On the basis of results obtained, Birch reported several conclusions and recommendations. Among them were the following: (1) although there is a statistical relationship between attitude toward music and previous musical experience (r=.333), it is not of sufficient size to enable accurate predictions; (2) although there is a statistical relationship between attitude toward music and self-confidence in teaching music (r=.320), it is not of sufficient size to enable accurate prediction; (3) there is not a significant relationship between attitude toward music and years of teaching experience; (4) teachers with unfavorable attitudes toward music should be identified

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[23]Hevner and Seashore, op. cit., pp. 83-151.

and given specific experiences conducive to the development of favorable attitudes. It was not within the scope of the study to determine which experiences would, in fact, be conducive to the development of favorable attitudes.

Students in three classes of Music Fundamentals for Elementary Education Majors at Indiana University served as subjects in Eby's study. The classes met twice a week for forty-five minutes throughout one semester. Each class was taught by a different graduate assistant, but all used the same materials and examinations.

The purpose of the study was to determine whether musical background, music aptitude, attitude toward teaching music, and student-teacher interaction affected students' achievement in the fundamentals class, as represented by final class grades. At the beginning of the semester students completed a biographical questionnaire, the Gaston Test of Musicality,[24] sections two and three, and an attitude scale based on the Q sort technique. Attitude was measured again at the end of the semester. A self-constructed checklist was used to determine student-teacher interaction during the course of the term. Interaction observations were made during twenty-six class periods.

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[24] E. Thayer Gaston, Test of Musicality. (Lawrence, Kansas: O'Dells Instrumental Service, 1957).

On the basis of multiple regression and correlation analyses, several results were reported. Those concerning attitude were: (1) there were significant differences in the students' attitudes toward teaching music after taking the fundamentals course, but this difference did not affect achievement in the course; (2) there seemed to be no relationship between students' past (before the course) experiences in music and their attitudes toward teaching music.

The purpose of Evans' research (also discussed above, see page 20) was to study musical experience, attitudes toward teaching classroom music, and relationships between attitude and experience. A self-constructed questionnaire was used to obtain data from 371 practicing classroom teachers. Analysis of attitude and experience factors produced the following conclusions by Evans: (1) a correlation of .56 was found between factors of musical experience and attitude toward teaching music, those with greater musical experience having more favorable attitudes toward teaching music; (2) particularly favorable or unfavorable experiences in music have strong influences on attitudes toward music; (3) favorableness of attitude increases with years of teaching experience; (4) college students respond less favorably to skills courses than to general cultural courses in music.

Evans also lists several implications, among them: (1) increased incidence of musical experience would foster more favorable attitudes toward teaching music; (2) lack of satisfaction and success create negative attitudes; (3) improvement in teaching music at the college level would improve the attitude of many prospective teachers.

The study by Gelineau is remarkable, in that of 204 questionnaires delivered to classroom teachers in Connecticut and New Hampshire, 100 percent were returned. The study was an attempt to determine factors which are responsible for the positive attitude of liking to teach music, and those which are responsible for the negative attitude of disliking to teach music.

Completed questionnaires were separated into two groups: those of teachers who liked to teach music, and those of teachers who did not. After comparing responses of the two groups on the other questionnaire items, it was determined that, in general, those who liked to teach music had had more musical experiences throughout their lifetimes than those who did not like to teach music. In addition, of those who liked to teach music the highest percentage had been teaching for over 25 years. Gelineau draws no conclusions concerning music preparation for classroom teachers, except to report that those who liked to teach music had a greater proportion of musical experiences during student teaching than those who disliked to

teach music. Of course, reporting causal relationships based on this type of study would be unjustified. It is quite possible that some other factor or factors not under consideration here could be responsible for both liking to teach music and a high amount of musical experience.

Smith[25] investigated changes of confidence in, and attitudes toward, music that occur during student teaching. Sixty-six student teachers at Central Michigan University were tested before and after an eight week student teaching experience. A self-constructed instrument was employed to measure attitudes toward teaching music. Several standardized tests were used to measure other variables. Of the results obtained, one of interest here is that there was a slight decrease in attitudes toward the teaching of music, not statistically significant ($\alpha = .05$). This decrease is particularly interesting because at the same time there was a significant ($\alpha = .05$) increase in confidence in teaching music. This indicates that in this case gains of confidence in music teaching did not engender more positive attitudes toward teaching music in the classroom.

Certain studies were chosen as particularly pertinent for discussion in this chapter because their

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[25]Martha Lucile Smith, "A Study of Elementary Student Teacher Confidence in and Attitudes Toward Music and Changes that Occur in a Student Teaching Experience." (Unpublished Doctoral Dissertation, Michigan State University, 1969).

conclusions and recommendations for further study lend support to the assumption of need for study in this area. Logan[26] sent questionnaires to all traceable in-service classroom teachers who had completed the music courses for prospective elementary classroom teachers at Florida State University between 1960 and 1964 and had taught for at least one year. The purpose of the study was to collect data which would be useful in determining the effectiveness of these courses. Among the areas of interest were respondents' attitudes toward their music preparation and toward music in their classrooms. Of the 549 questionnaires sent, 402 were returned, of which 358 were used in the study. Forty-four were discarded because the respondents were not elementary classroom teachers who had taught for at least a year.

Among the conslusions drawn were: (1) for 75 percent of the respondents the preparatory curriculum increased desire to teach music to children; (2) a majority of the respondents felt the most important purpose of classroom music to be that of providing pupil understanding and appreciation of music by receiving satisfaction from performing and listening to music.

Among recommendations of areas for further study based on his findings, Logan lists: (1) sectioning of

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[26]Joseph Logan, "An Analysis of In-Service Teacher Evaluations of Teacher Preparatory Courses in Elementary School Music at Florida State University," Journal of Research in Music Education, XV (Winter, 1967).

music fundamentals classes for prospective elementary classroom teachers according to degrees of students' musical skills and knowledge; (2) extended opportunities for prospective elementary classroom teachers to observe music teaching by experienced classroom teachers.

One of the few experimental researches encountered in the literature review was that of Glasgow.[27] The study dealt with the effectiveness of one method of in-service training as a means of improving classroom teacher competency in teaching music. Fifty-two Lane County, Oregon, classroom teachers who were judged deficient in music were given twelve weeks of instruction in music fundamentals. A control group was comprised of teachers who had been judged highly competent in teaching music. Both groups were pre-tested with a music skills test constructed by the experimenter. A t test between groups showed them to be significantly different ($\alpha = .05$). Both groups were post-tested with an equivalent form of the skills test and again found to be significantly different ($\alpha = .05$). Glasgow reports a sizeable decrease in the difference between the groups, even though their difference remained one of statistical significance after the treatment. However, if the two groups are to be regarded as samples of larger populations, and experimental results made generalizable,

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[27] Robert Glasgow, "A Study and Evaluation of an In-Service Training Class in Music for Elementary Teachers." (Unpublished Doctoral Dissertation, University of Oregon, 1961).

the statistical results, indicating that the two sets of scores did, in fact, come from two different populations with regard to musical skills, must be accepted. In addition, it cannot be shown that the decrease in difference between the groups was not a result of statistical regression, for which Glasgow's design did not control.

These considerations notwithstanding, some valid conclusions were drawn as a result of the study, some based on a questionnaire of background and attitude toward teaching music which was also administered as part of the research. One of particular interest here is that achieving skills in a few basic areas of music helps to erase long-standing fears and stimulates interest and desire to learn more about music.

Another study concerning in-service teachers' music competencies and the role of in-service training was done by Ardrey.[28] As a part of the research the experimenter, along with thirteen selected music supervisors and college music educators determined certain basic teacher competencies and the emphasis they should receive in preservice training. Based on the results, the chief functions of preservice music training for classroom teachers were concluded to be: development of a broad understanding of what music can do for children, and provision of successful

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[28] Eldon Ardrey, "The In-Service Needs of Arizona Primary Classroom Teachers to Teach Music." (Unpublished Doctoral Dissertation, University of Colorado, 1959).

experience in musical activities prior to teaching children.

In summarizing the available literature concerning music training and classroom teacher attitude, it was concluded: Most studies have been surveys using self-constructed questionnaires; most studies dealing with attitudes are concerned with attitudes toward teaching music; it is generally agreed that preservice music training can be valuable in shaping the attitudes of classroom teachers; ensuring satisfaction in musical experiences is believed to be an effective method of promoting positive attitudes about music in the classroom; there is a lack of agreement concerning the effectiveness of other methods of improving attitudes; experimental research dealing with effective ways to improve attitudes about music in the classroom is scarce.

Attitude Measurement--Guttman's Facet Theory

It is not the purpose of this section to review the history of attitude measurement, or even of attitude measurement in music. That attitude measurement represents a small portion of research in music education is illustrated by Schneider and Cady,[29] who in their summary of competent research done between 1930 and 1962, cite

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[29] E. Schneider, and H. Cady, Evaluation and Synthesis of Research Studies Relating to Music Education (Columbus: The Ohio State University Research Foundation, 1965).

only three studies focusing on musical attitudes. This scarcity of research in the measurement of attitudes toward music is undoubtedly responsible for the fact that recent studies in this area have employed self-constructed criterion instruments. The preceding section of this chapter illustrates the commonness of this practice.

Among the benefits of standardized tests is the fact that the results of studies which have employed the same instrument can be compared more easily than the results of studies which have each employed their own, self-constructed instrument. Especially in the area of attitude measurement, it is difficult to interpret and compare the results of researches when they are based on data gathered by instruments which probably measure different things, and certainly have varying degrees of reliability and validity.

In constructing the attitude scale for this study, it was decided to base it on a rational theory of attitude construct so that when validated it could be used outside the context of the study and other comparable scales could be constructed based on the same theory. The Guttman facet theory was selected because it offers a rational and systematic method of selecting and organizing item content and presentation.

Four sources proved particularly beneficial in explaining Guttman facet theory.[30, 31, 32, 33] As their information is essentially the same, they will not be discussed separately, but will be amalgamated in a general explanation of the Guttman theory and its application to attitude scale construction.

Attitudes are defined by Guttman in terms of two dimensions: joint struction, dealing with the level of personal interaction with an attitude object, and lateral struction, dealing with the latitude of subject matter involved in a given attitude. Important to the concept of joint struction is the fact that Guttman defines attitudes as "a delimited totality of behavior with respect to something."[34] rather than as a predisposition toward some behavior. Thus, both belief about some attitude object and overt action with respect to that object characterize an attitude toward the object. In addition, Guttman regards overt action as a stronger form of behavior

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[30] Guttman, Inter-group Beliefs," pp. 318-328.

[31] John E. Jordan, Attitude--Behaviors Toward Mentally Retarded Persons: A Cross-Cultural Analysis (East Lansing, Michigan: Michigan State University, 1970).

[32] Jordan, Education and Physically Disabled Persons.

[33] John Paul Maierle, "An Application of Guttman Facet Analysis to Attitude Scale Construction: A Methodological Study." (Unpublished Doctoral Dissertation, Michigan State University, 1969).

[34] Guttman, "Attitude and Opinion Measurement."

toward the attitude object than belief. Another measure of weakness or strength of attitude behavior is whether a person is viewing the attitude object with respect to himself, or with respect to a group of people like him. Considering an attitude object with respect to others is a weaker form of attitude behavior than considering it with respect to oneself. A third measure of the strength or weakness of attitude behavior is whether a person's relationship to the attitude object is comparative, or one of interaction with the attitude object. Interaction is the stronger attitude behavior.

In formulating the original joint struction model, Guttman regarded these three measures of attitude behavior strength as the three "facets" of joint struction. Table 1 contains these three facets.

TABLE 1.--Guttman's Facets Used to Determine Component Structure of an Attitude Universe.*

(A) Subject's Behavior	(B) Referent	(C) Referent's Relationship To Attitude Object
a_1 belief	b_1 subject's group	c_1 comparative
a_2 overt action	b_2 subject himself	c_2 interactive

*Based on a similar table appearing in Jordan, 1970, p. 8.

As can be seen, each of the three facets contains two elements. The weaker element is represented with the subscript 1 and the stronger with the subscript 2. Using one element from each facet, profiles of attitude behavior strength can be derived. There are 2 x 2 x 2, or eight possible combinations, yielding eight profiles, i.e., (1) $a_1\ b_1\ c_1$ (2) $a_1\ b_1\ c_2$...(8) $a_2\ b_2\ c_2$. Since the more strong elements a profile contains the stronger the profile, it can be seen that profile 8 represents the strongest attitude behavior and profile 1 represents the weakest.

The profiles can be interpreted semantically. Profile $a_1\ b_1\ c_2$ reads: belief (a_1) of a subject that his group (b_1) interacts (c_2) with the attitude object. Profile $a_2\ b_2\ c_2$ reads: overt action (a_2) by the subject himself (b_2) interacting (c_2) with the attitude object.

Using four profiles, Guttman arranged them into joint struction levels in ascending order of strength of attitude behavior. These levels and their corresponding profiles appear in Table 2.

Guttman hypothesized that since adjacent levels have the most elements common to their profiles (that is, profile $a_1\ b_1\ c_1$ can be seen to have more elements in common with profile $a_1\ b_1\ c_2$ than with profile $a_2\ b_2\ c_2$), an intercorrelation matrix of the four levels would have a simplex ordering. In other words, maximum predictability of each level is attainable from levels adjacent to it.

TABLE 2.--Guttman Levels of Joint Struction.*

Level	Description	Profile
1	Stereotype	a_1 b_1 c_1
2	Norm	a_1 b_1 c_2
3	Hypothetical Interaction	a_1 b_2 c_2
4	Actual Personal Interaction	a_2 b_2 c_2

*Based on a similar table appearing in Jordan, 1970, p.8.

This does not mean that actual correlation coefficients are predicted semantically, only that a pattern of relative sizes of correlation within a matrix can be predicted.

Jordan (1968) proposed a revision of the Guttman levels, based on increasing the three joint struction facets to five. Jordan's set of facets and their elements appear in Table 3.

TABLE 3.--Jordan Joint Struction Facets.*

(A) Referent	(B) Behavior	(C) Actor	(D) Actor's Relationship to Attitude Object	(E) Type of Relationship
a_1 others	b_1 belief	c_1 others	d_1 comparison	e_1 symbolic
a_2 self	b_2 overt action	c_2 self	d_2 interaction	e_2 operational

*Based on a similar table appearing in Jordan, 1970, p. 8.

Certain of Jordan's 32 possible profiles were eliminated because of semantic redudancy or impossibility. For example, where profile (a_2 b_1 c_1 d_2 e_2) is possible (I believe others interact operationally with the attitude object), profile (a_2 b_2 c_1 d_2 e_2), (I act others interact operationally with the attitude object) makes no sense. After the elimination process, which will not be dealt with in detail, six profiles were selected. These six profiles represent Jordan's six levels of joint structure, as depicted in Table 4.

TABLE 4.--Jordan's Six Levels of Joint Struction.*

Level	Profile	Description
1	a_1 b_1 c_1 d_1 e_1	Societal Stereotype (what other people believe)
2	a_1 b_1 c_1 d_2 e_1	Societal Norm (what other people do)
3	a_2 b_1 c_1 d_2 e_1	Personal Moral Evaluation (what I think is right)
4	a_2 b_1 c_2 d_2 e_1	Personal Hypothetical Action (what I would do if...)
5	a_2 b_2 c_2 d_2 e_1	Personal Feeling (how I feel when...)
6	a_2 b_2 c_2 d_2 e_2	Personal Action (what I have done)

*Based on a similar table appearing in Jordan, 1970, p. 8.

Again, these levels are hierarchical in nature, the strongest attitude behavior being represented by level six.

Any or all of the six levels can be used in the construction of an attitude scale. A scale employing more than one level has only the number of basic items that are in one level. Items for each of the other levels consist of the same basic items, reworded to apply to the level in question. For example, in a scale using all six levels and having twenty basic items in level one, the same twenty items are reworded to form level two, and so on through level six. This yields twenty items on each of the six levels, or a total of 120 items.

While joint struction determines the person's relationship to the attitude object, it is the function of lateral struction to describe specifically and accurately the attitude object itself. The facets of lateral struction are made up of the constituent parts of the subject matter in question. For example, in an attitude about music listening, one facet would deal with the type of music, vocal or instrumental. Another facet might concern the style of the music in question. A third facet could deal with the length of listening time, and so on. As with the joint struction facets, each lateral struction facet contains more than one element. It is the semantic profile obtained by selecting one element of each facet which determines

the specific attitude object to be considered. Table 5 depicts three facets of an attitude toward music listening.

TABLE 5.--Facets of an Attitude Toward Music Listening.

(F) Type	(G) Style	(H) Time
f_1 Instrumental	g_1 Renaissance	h_1 less than 5 min.
f_2 Vocal	g_2 Baroque	h_2 5 min.-10 min.
f_3 Instrumental and Vocal	g_3 Classical	h_3 10 min.-15 min.
	g_4 Romantic	h_4 15 min.-20 min.
	g_5 Rock & Roll	

Of course, each of these facets ideally would contain as many elements as there are possibilities for consideration in each area.

It can be seen that profiles derived from these facets can lead to very accurate descriptions of attitude objects. For example, an attitude scale question such as "How do you feel about listening to music?" lacks the precision of "How do you feel about listening to instrumental music (f_1) of the Baroque (g_2) for five to ten minute periods (h_2)?" or "How do you feel about listening to vocal (f_3) rock and roll music (g_5) for fifteen to twenty minutes (h_4)?"

When all the facets of an attitude object have been determined, they are listed and their semantic relationships to one another are determined. By using linking words, the facets can be formed into a "mapping sentence." The mapping sentence contains all the facets of an attitude object, each with all of its elements. It acts as an aid to the researcher in selecting specific attitude objects upon which to base attitude scale items. Once this complete breakdown of a subject area is obtained, the researcher can choose systematically the content of attitude scale items, diminishing the probability of constructing vague or ambiguous items and helping ensure that all desired attitude objects are included. (See Appendix I.)

It is not necessary to include all lateral facets in an attitude scale. The researcher can choose those facets in which he is interested and the elements of the facets to be considered. In constructing a scale, then, the basic item pool includes a certain number of items representing each selected facet, and presented at the desired level or levels. The use of this a priori basis for determination of item content and presentation facilitates the achievement of high construct and content validity.

Conclusions

On the basis of the literature reviewed in this chapter certain conclusions have been drawn. They are: (1) that the investigation of teacher attitudes toward music is an area of importance to music education, and is recognized as such by music educators and researchers; (2) that although research has been completed in related areas, none, to date, has dealt specifically with elementary classroom teachers' attitudes toward the value of elementary school general music, or with the modification of those attitudes; (3) that research dealing with the effects of preservice training on classroom teachers' attitudes toward elementary school general music has been recommended by researchers; furthermore, specific aspects of preservice training under consideration in this study have been suggested for investigation; (4) that Guttman's facet theory provides a sound and usable basis for attitude scale construction, and is suitable for use in this study.

CHAPTER III

CRITERION INSTRUMENTS

Variables to Be Measured

For the purposes of this study it was necessary to obtain accurate measures of two variables: attitudes toward the value of elementary school general music; and music achievement. The ABS-EGM was developed according to Guttman's facet theory, described in Chapter II, to measure attitude toward the value of elementary school general music. Colwell's Music Achievement Tests (MAT) were selected to measure music achievement.

Colwell MAT

To measure music achievement for the purpose of sectioning students in Music 135, a test was needed which would be suitable for administration to college students and at the same time appropriate for the measurement of students who had had no formal music training. The optimum testing result obtainable for this purpose would, of course, be a bimodal distribution with one cluster of scores representing high achievers and the other representing low achievers. A test which was too difficult or advanced would produce a single cluster of scores at the

bottom of the distribution with little variance, providing no basis for discrimination between high and low achievers. Inversely, a test of insufficient difficulty would produce a "ceiling effect" with scores clustered at the top of the distribution--equally useless.

Another consideration was that of test reliability. As a rule of thumb, .80 represents the minimum reliability useful in the measurement of individuals and .50 constitutes the minimum for groups.[1] Reliability is simply an estimate of the consistency with which a test measures. If a test is inconsistent in measuring a particular variable, it is said to be unreliable and its usefulness is limited.

A third consideration was that of test validity. This is, basically, the question of whether a test measures what it is designed to measure. A test can have high reliability and still not be of any use if it is actually measuring something other than the variable of interest. It is impossible, however, for a test to have low reliability and high validity. If a test is not consistent it cannot measure anything satisfactorily, including the variable of interest.

After examining available music achievement tests, MAT was selected for use, primarily on the basis of the above three considerations. Lehman, reviewing MAT in

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[1]Leonard and House cited by Paul R. Lehman in Oscar Buros, The Seventh Mental Measurements Yearbook, Volume I (Highland Park, New Jersey: The Gryphon Press, 1972), p. 527.

The Seventh Mental Measurements Yearbook, says,

> MAT is the best, most comprehensive, and most widely useful standardized achievement test battery in music currently available...(MAT) can be of help in sectioning prospective classroom teachers for fundamentals and methods courses.[2]

Test I and II of MAT are intended for use in grades 3-12 and 4-12 respectively. From Test I, Part 1 (pitch discrimination) and Part 3 (meter discrimination) were selected. From Test II, Part 2 (feeling for tonal center) was selected. It was believed that the combination of these three sections would provide a sufficient amount of difficulty to avoid a ceiling effect and yet not be so difficult as to create a cluster of scores at the bottom of the distribution. In other words, the combination would provide a spread in scores sufficient for discriminating between high and low achievers.

Reliabilities of Tests I and II used with grades 9 through 12 are reported as .921 and .965,[3] certainly high enough for individual measurement. Even though reliabilities of individual parts within each test are somewhat lower, the combination of the three parts used was thought justified. Colwell states that "... the

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[2] Paul R. Lehman, "Critique of the Colwell Music Achievement Tests in Oscar Buros (editor) The Seventh Mental Measurements Yearbook No. 22 (Fall, 1970), p. 528.

[3] Richard Colwell, "The Development of the Music Achievement Test Series," Bulletin of the Council for Research in Music Education, No. 22 (Fall, 1970), p. 61.

teacher can...use only two or three parts, without materially affecting the reliability."[4]

Lehman reports that a correlation of .92 between scores on Tests I and II of MAT and teachers' selections of their five best and five poorest students was obtained. This is reported as evidence of criterion-related validity. Colwell, however, has stated that in this case measures of criterion-related validity are, at best, suspect since "teacher ratings are notoriously unreliable, usually influenced as much by irrelevant items such as personality, interest, and effort as by true achievement."[5] Therefore, emphasis was placed on content validity in the development of MAT. Content is based on the objectives of basic music textbook series published by Allyn and Bacon; American Book Company; Follett Education Corporation; Ginn and Company; Holt, Rinehart, and Winston; Prentice-Hall; Silver Burdett; and Summy Birchard Company. In addition, several elemtary music teachers, supervisors, and specialists were consulted and the Music Educators National Conference text, The Study of Music in the Elementary School, was analyzed. Because item content is based on these criteria, MAT can be considered to measure generally accepted objectives of music achievement.

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[4]Lehman, op. cit., p. 248.

[5]Colwell, op. cit., p. 59.

Aural stimuli of MAT are recorded on 33 1/3 rpm long playing records. Items in Tests I and II are played by violin, viola, cello, or piano. Instructions are given by a woman's voice which is both pleasant sounding and easy to understand.

Part 1 of Test I, "Pitch Discrimination," has two subtests. Subtest a is composed of fifteen items. Each item presents two tones and the examinee is to indicate which tone is higher in pitch or whether they are the same. The response is indicated by filling in a blank marked 1, 2, or S on a machine-scored answer sheet.

Subtest b consists of ten items. In each item three tones are presented and the examinee is to indicate which of the three tones is lowest by filling in a blank marked 1, 2, or 3 on the answer sheet. Items in both subtests are presented at various pitch levels and the smallest interval used is the half-step. Example questions are presented before each subtest.

Part 3 of Test I is labelled "Meter Discrimination" and consists of fifteen items. Each item is a phrase from a harmonically accompanied song played on the piano. The examinee is to decide whether it is in duple or triple meter and indicate his choice by filling in the blank marked 2, 3, or ?. It is intended that the songs be familiar elementary school songs, although it is inevitable that some will be more familiar than others. This probably

is of little importance, as Colwell states that results of extensive testing indicated that "familiarity only to the extent of knowing the song does not affect results."[6]

Part 2 of Test II, "Feeling for Tonal Center," has two subtests. Subtest a, cadences, consists of ten items. Each item presents a four-chord cadence ending with the tonic in both the bass and soprano. All the cadences are in the major mode. After each cadence three pitches are played separately and the examinee is to indicate which of the three pitches is the tonic or whether none of the pitches is the tonic. A blank marked 1, 2, 3, or 0 is to be filled in.

Subtest b, phrases, also consists of ten items. Each item presents a melodic phrase at least four measures long with harmonic accompaniment. Again, the examinee is to indicate which of three tones is the tonic or whether none of the tones is the tonic. The tones are played immediately after each example. Since these phrases do not always end on the tonic, duplication of the cadence subtest is avoided.

As used in this study, the tests were administered in the order: Test I, part 1; Test II, part 2; Test I, part 3. A tape recording of the sections in this order was made to avoid the two record changes that would have been necessary otherwise. Since only three parts were used,

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[6] Colwell, Administration and Scoring Manual, p. 16.

the total testing time was only approximately 30 minutes, including instructions and other administrative details. There are 60 items in all.

Since MAT was used only for within-group comparisons in this study, norms associated with its standardization were not used and will not be discussed in this chapter.

Development of ABS-EGM

The first consideration in constructing the ABS-EGM was the determination of lateral facets which make up teachers' attitudes about elementary school general music. In an attempt to insure high content validity, the opinions of practicing elementary classroom teachers were obtained. If facets are based, at least in part, on the ideas of actual classroom teachers about music in the elementary school, the resulting scale items will be valid measures of teacher attitude.

A questionnaire of open-ended structure was designed to collect as many opinions of varying nature as possible (see Appendix II). The instructions of the questionnaire were simply,

> Using brief statements, give as many reasons as you can why music should or should not be included in your elementary curriculum. For example:
>
> 1. Music should not be included because math is needed more.
> 2. Music should be included because it helps develop motor skills.
>
> Do not put your name on this paper. Thank you for your cooperation.

Teachers were instructed not to put their names on the questionnaire because it was thought that responses would be more candid if the teachers remained anonymous.

The questionnaires were given to seventy-five elementary classroom teachers in the southern Michigan area. Four school systems were chosen because of ease of access and the fact that they represent a wide range of socio-economic levels. The systems were in Oak Park, Haslett, Eaton Rapids, and East Jackson. Instead of mailing, questionnaires were delivered to the schools and then distributed to teachers by school personnel.

Of the seventy-five questionnaires delivered, fifty were returned in time to be used. Statements were written on note cards and duplications were eliminated. They were then sorted into piles, each pile representing a different facet. The pile for each facet contained some positive and some negative statements, although positive statements were by far the more abundant. A selection of representative statements appears in Appendix III.

Opinions of the Music Education faculty and certain graduate students at Michigan State University were used to augment the teacher statements and to determine other facets. In all, nine facets concerning elementary school general music were derived. They deal with the type

of music activity in question; the level of elementary school, early, middle, or upper; who teaches the music; where the music is taught; facilities which are needed; the general student needs which are fulfilled; specific abilities which are developed; drawbacks involved; and costs. Table 6 lists the facets and the elements within each facet.

The semantic relationship of the facets to one another was then determined. With the use of linking words the facets were formed into a mapping sentence. The mapping sentence appears in Appendix I. The five facets that are concerned with the development of joint struction are not included (see Chapter II). Only the nine lateral struction facets are of importance in the mapping sentence.

Since the purpose of ABS-EGM was to be that of discrimination between positive and negative attitudes, it was decided to use facets K (general student needs), L (specific abilities), M (drawbacks), and N (costs) as a basis for items. These facets were the most frequently represented by questionnaire statements and lent themselves well to the construction of discriminating items. Several items were constructed for each facet so that after preliminary administrations those facets with the least discriminating ability could be eliminated and five items for each facet could be retained.

TABLE 6.--Lateral Struction Facets and Their Elements.

General Student Needs	Specific Abilities
Relaxation	Sense of pitch
Means of expression	Sense of timbre
Break from academics	Sense of loudness
Emotional stimulation	Enjoyment skills
Self-discipline	Awareness of instruments
Fun time	Awareness of various kinds of music
Emotional outlet	Aesthetic capacities
Humanistic study	Understanding of music in cultures
Group activity	Appreciation of musical organization
Uncover unknown talents	Critical listening
Public performance	Listening concentration
Creative outlet	Group cooperation
Success	Word rhyming
Bring out shy students	Coordination through rhythm

Type	Level	Teacher	Place
Performance	K-1	Classroom	Classroom
Listening	2-3	Specialist	Special room
Creative	4-5-6	Combination	
Cognitive			

Facilities	Drawbacks
Special instruments	No practical (employment) value
Piano	Takes time from "basic" skill areas
Record Player	Penalizes child with no interest
Tape recorder	Embarrasses child with no talent
Movie Projector	"Fun and games" not instructive

Costs
Time in hours per week
Monetary

Items were constructed in the form of statements to which the respondent could react by marking the response "strongly agree," "agree," "disagree," or "strongly disagree." In some items the statements are positive, so a response of "strongly agree" would indicate the most positive attitude. In others, the statements are negative, so a response of "strongly disagree" would indicate the most positive attitude.

There are only four response choices per item. No neutral or "no opinion" response is provided. This "forced choice" format was used in order to reduce reluctance in decision making on the part of respondents. The loss of information resulting from this format is offset by gains in positive decision making. The responses were weighted so that the one indicating the most positive attitude would receive four points and the other responses would receive three, two, and one point respectively. Scoring is accomplished by summing the total points received--the highest total score indicating the most positive attitude.

Joint struction levels chosen for presentation of the items were I (what other people believe), IV (what I would do if...), and V (how I feel when...). These levels were chosen for several reasons. Since the scale was designed to measure attitudes of prospective teachers rather than practicing teachers, level VI (what I have done) is not applicable in the context of elementary

school teaching. Therefore, the levels representing the strongest attitude behaviors are levels IV and V (as explained in Chapter II). Level I, while representing the weakest attitude behavior, is useful as a "baseline" for comparison with higher levels.[7]

Statements appearing in items of different levels take different forms. In level I they appear as, "Most elementary teachers believe that_____." The format of level IV statements is, "If I were in charge I would _____." Level V statements appear in the form, "When_____, it makes me feel..." The response choices for level V, instead of indicating amount of agreement, are "Very Good," "Good," Bad," and "Very Bad."

After the initial construction of items they were submitted to the Music Education faculty at Michigan State University and several graduate students in Music Education for their reactions concerning any semantic problems. Based on the resulting information revisions in wording were made and some items were eliminated entirely. This left a pool of seventy-five revised items, twenty-five on each of the three levels. These seventy-five items were then administered to a section of Music 135 which was not included in any other part of the study. When the students had completed the items their reactions to individual

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[7]John E. Jordan, Private Interview. See Chapter II for discussion of simplex correlation matrix.

statements were discussed. They were asked about such matters as ambiguity, relevance, and wording.

Results were analyzed to determine the relative discrimination ability of items. First, the 25 percent of the sample with the highest total scores and the 25 percent of the sample with the lowest total scores were identified. The proportion of the upper group and the proportion of the lower group which scored either three or four points was then computed for each item. The difference between the proportion of the upper group which scored either three or four points and the proportion of the lower group which scored either three or four points was considered the discrimination index of an item. For example, if on a particular item 75 percent of the upper group scored either three or four points and 25 percent of the lower group scored either three or four points, the item's discrimination index would be 50. The higher the discrimination index of a particular item, the more the item discriminates between the upper and lower groups.

On the basis of computed item discrimination and respondents' reactions to items expressed in the discussion described above, further revisions were made and five items were eliminated from each level. This left a total of twenty items (five from each of the four facets) on each of the three levels, or sixty items in all. These items

were put together with instructions to form ABS-EGM, form I (see Appendix IV).

ABS EGM, form 1, was then administered to two more sections of Music 135 which were not involved in other aspects of the study. The scale was also given to two sections of Music 345, an elective course in elementary school music, populated mainly by students who have taken Music 135 and chosen to continue in music as Fine Arts majors.

After further computation of item discrimination indices Level I was eliminated entirely. This was done for two reasons. The discrimination indices of Level I were consistently lower than those of all other items. In fact, the majority of Level I items showed almost no discrimination between those who scored above the 75th percentile and those who scored below the 25th percentile on the total scale. More importantly, signs of fatigue were observed in students as they completed the last several items of the sixty item scale, and their comments after having completed the scale indicated that they felt it was too long. The problem of having too many items is especially important in attitude measurement, as fatigue or boredom may easily affect the expression of the attitudes under consideration. By eliminating the twenty items of Level I a forty-item scale with the same basic item content as the sixty-item scale was derived. In addition, some

further wording revisions were made and the resulting forty-item scale was labelled ABS-EGM, form II, which subsequently became simply ABS EGM (see Appendix V).

A "known group" measure of validity was completed using responses of the two groups, combined Music 135 sections and combined Music 345 sections, to the forty items which were retained. Validity of attitude measures is extremely difficulty to determine. There are no right or wrong answers and respondents can often tell what the researcher is seeking and respond accordingly if they wish. The complete truthfulness of respondents must be depended upon.[8] In addition, no scale suitable for determining concurrent validity exists, or it would have been used in the first place, instead of constructing a new scale.

The known group method of validation, as used in this study, is the determination of whether an instrument is capable of showing a difference in attitude when it does, in fact, exist. The two groups used can be assumed logically to differ in attitude toward the value of elementary school general music. The basis for this assumption is the fact that Music 135 students are enrolled in the course because it is required, while Music 345 students have, for the most part, taken Music 135 and elected to enroll in further elementary school music courses. Some of the Music 135 group can be assumed not to differ from

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[8]Lehman, Tests and Measurements in Music, p. 78.

the Music 345 students, as they all represent a population of Music 135 students who elect to go on in music. The mean attitude for the Music 135 group, however, was assumed to be significantly less positive than that of the other group. The results of a test of significance between the two groups using the t statistic are reported in Table 7.

TABLE 7.--t Test between Scores of Music 135 Group and Music 345 Group on Levels IV and V of ABS-EGM, Form I.

Group I (135)	Group II (345)
n=41	n=31
$\bar{x}$=117.98	$\bar{x}$=125.23
σ=12.59	σ=13.65
t= -2.31, p=.02	

These results indicate that the null hypothesis $M_1-M_2=0$, or that the two sets of scores do not represent populations with different means, can be rejected at the .02 level of significance. In other words, the scores of the two groups did differ significantly. It can be assumed, then, that the forty items are capable of showing differences in attitudes that are at least as great as the differences between these two groups. In addition, these

results indicate that the "ceiling effect," discussed earlier in this chapter, has been avoided. Since the mean of the higher group is 125.23 and the highest possible score on the forty items is 160 (four possible points for each of forty items), the mean is 2.55 standard deviations below the upper limit of the scale. This means that fewer than six in 1,000 normally distributed scores would fall on or above 160 if the distribution had a mean of 125.23 and a standard deviation of 13.65. In other words, the scores, even of the higher group, are not clustered near the top of the scale in such a way that would inhibit discrimination ability of the scale.

Reliability of the ABS-EGM was computed using the results obtained from administering it to the eight sections of Music 135 which were included in the study during Fall Term, 1972. Data were analyzed using a reciprocal averages technique (RAVE).[9] This is essentially a method whereby qualitative data can be quantified. The mathematical basis for the reciprocal averages technique is discussed by Torgerson[10] under the heading of principal components scaling.

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[9]Subroutine RAVE from FORTAP: A FORTRAN TEST ANALYSIS PACKAGE by F. B. Baker and T. J. Martin, revised for use on the CDC 3600 and CDC 6500 at Michigan State University by David J. Wright, and appearing in Occasional Paper No. 10, Office of Research Consultation, School for Advanced Studies, College of Education, Michigan State University.

[10]Walter S. Torgerson, Theory and Methods of Scaling (New York: John Wiley & Sons, Inc., 1962), pp. 338-345.

Output of the computer program used consists of a Hoyt reliability coefficient and a set of ideal item weights. Hoyt reliability is a measure of internal consistency. Items are scored using the original weights and reliability is computed based upon the obtained scores. A new set of weights is then automatically derived. The derived weights are designed to give maximum reliability. Items are then rescored using the derived weights and reliability is computed again. This process is continued until the difference between two reliability coefficients is less than .05. The total score for each respondent computed using the final set of weights is printed, along with the final reliability coefficient.

By using item weights derived with this technique several things can be accomplished:

1. The reliability of each item and the internal consistency of the weighted inventory are maximized.
2. The correlation between item and total score is maximized.
3. The coefficient of variation is maximized.
4. Questions which bear no relation to the total score variable are automatically weighted so that they exert no effect on the scoring.[11]

The RAVE analysis of ABS-EGM data derived only one set of ideal weights after the original. Since the reliability coefficient obtained with the derived weights was less than .05 higher than that obtained with the original

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[11] RAVE, op. cit., pp. 8-9.

weights, scores computed using the first set of derived weights were printed. The analysis of variance (ANOVA) table upon which the Hoyt reliability coefficient for the original weights is based appears in Table 8. The ANOVA table corresponding to the analysis of derived-weight information appears in Table 9.

TABLE 8.--Hoyt Reliability--Original Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	r
Individuals	185	704.112	3.806	10.289	.9028
Error	7215	2668.866	.3699		

TABLE 9.--Hoyt Reliability--Derived Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	r
Individuals	185	962.297	5.202	10.740	.9069
Error	7215	3494.256	.4843		

It was encouraging that the reliability obtained with the original set of item weights was nearly as high as that obtained with the derived ideal weights. Since the total scores retained for individuals were those computed with the derived weights, the reliability of ABS-EGM was that obtained with derived weights, or .9069.

Further reliability checks were completed at the end of Winter term, 1973, and Spring term, 1973. Each computation was performed on only the data from the eight sections included in the study for the term in question. These further reliability computations were done in order to avoid reporting a spuriously high reliability figure. Results obtained were similar to those of the original reliability computation. They are reported in Tables 10, 11, 12 and 13.

TABLE 10.--Hoyt Reliability--Winter Term, 1973. Original Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	r
Individuals	157	585.468	3.729	10.590	.9056
Error	6123	2156.108	.3521		

TABLE 11.--Hoyt Reliability--Winter Term, 1973. Derived Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	r
Individual	157	830.699	5.291	11.306	.9115
Error	6123	2865.592	.4680		

TABLE 12.--Hoyt Reliability--Spring Term, 1973. Original Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	r
Individuals	160	607.226	3.795	11.276	.9113
Error	6240	2100.228	.3366		

TABLE 13.--Hoyt Reliability--Spring Term, 1973. Derived Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	r
Individual	160	844.726	5.741	12.724	.9145
Error	6240	2815.237	.4512		

A final reliability computation was made using combined data from all three terms of Music 135. This was done for two reasons. A total reliability figure across all twenty-four sections included in the study was desired. In addition, since the ideal weights derived in a particular reliability computation are those used in arriving at the printed individual scores, all the scores used in other aspects of the study had to be computed during the same reliability check. This is because they would not be comparable if they had been computed with slightly different sets of ideal derived weights. Results of the final reliability check are reported in Tables 14 and 15.

TABLE 14.--Hoyt Reliability--Combined Terms. Original Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	r
Individuals	504	1944.440	3.858	10.900	.9083
Error	19656	6956.574	.3539		

TABLE 15.--Hoyt Reliability--Combined Terms. Derived Weights.

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	r
Individuals	504	2479.323	4.919	11.014	.9092
Error	19656	8779.268	.4466		

Five items were added to the basic forty-item scale. Four are demographic, asking the respondents to indicate age, year in college, years of music performance experience, and years of teaching experience. The other item simply asks who the respondent thinks should teach elementary school general music, the classroom teacher, a music specialist, or a combination. These five items were not intended to be used as a part of this study, but to gather information which could be used in the future. Table 16 gives a breakdown of ABS-EGM by item number, item content, facet, and level.

TABLE 16.--Item Content Breakdown.

Facet	Level IV	Level V	Item Content
(L)	1	21	Awareness of kinds of music
	2	22	Ability to listen
	3	23	Relationship of music to various cultures
	4	24	Group cooperation
	5	25	Enjoyment skills
(K)	6	26	Break from academic work
	7	27	Means of expression
	8	28	Brings out shy students
	9	29	Helps develop self-discipline
	10	30	Performance experience
(M)	11	31	Takes time from basic skill areas (math, reading)
	12	32	Penalizes child with no interest
	13	33	Little practical (employment) potential
	14	34	Embarrasses child with no musical talent
	15	35	"Fun and games," rather than instructional
(N)	16	36	Cost of no more than 1 hour/week
	17	37	$ cost at least equal to academic subjects (per child)
	18	38	Cost of at least 2-3 hours/week
	19	39	Greater $ cost/child than some academic subjects
	20	40	Cost of 4-5 hours/week
		41	Who should teach elem. general music
DEMO-GRAPHIC		42	Age of respondent
		43	Year in college of respondent
		44	Years of music performance experience of respondent
		45	Years of teaching experience of respondent

CHAPTER IV

DESIGN OF THE STUDY

Sample

Five hundred thirty-one college students participated in this study during Fall term, 1972, Winter term, 1973 and Spring term, 1973. They were all enrolled in Music 135, a required music fundamentals course for Elementary Education majors at Michigan State University. Eight sections of Music 135 were included in the study for each of the three terms, a total of twenty-four sections. Size of the sections ranged from sixteen to twenty-nine students (see Appendix VI for data on individual sections). Due to course drop-outs and absences, only 505 of the 531 subjects completed the study. This constitutes just over 95 percent of the original sample. Of the 505 subjects in the final sample, 195 were freshmen, 96 were sophomores, 126 were juniors, and 88 were seniors. Twenty-nine subjects were over 30 years of age, 23 were between 25 and 30 years old, 208 were 20 to 24 years old, and 265 were under 20. Only one person in the final sample had had five or more years of teaching experience, while 27 had taught for under five years, 116 had completed student teaching, and 361 had had no teaching experience.

A listing by section of the above subject traits appears in Appendix VII.

The eight sections were selected each term according to the schedules of teachers involved in the study. There are assumed to be no systematic differences between the sections selected. Four of the sections met at 8:00 A.M.; six met at 9:10 A.M.; four met at 10:20 A.M.; five met at 11:30 A.M.; two met at 12:40 P.M.; two met at 1:50 P.M.; and one met at 3:00 P.M. Each class met in one of two adjacent rooms with approximately the same lighting, furniture, decor, and instructional facilities.

Design

Of the 24 Music 135 classes included in the study, eight were made high music achievement sections, eight were made low music achievement sections, and eight were heterogeneous. Level of music achievement within sections was controlled by administering the MAT each term as a pretest and sectioning students according to the results. Four teachers were included in the study, each of whom taught two high, two low, and two heterogeneous sections. The teachers were all graduate assistants in Music Education. Sectioning according to music achievement level was one independent variable considered in the study. The other independent variable of interest was students' viewing a series of videotaped elementary music classes.

Of the eight sections at each music achievement level, four viewed the videotapes throughout the course of the term and four did not. Sections to view the videotapes were selected in such a way that one of the two sections at a given music achievement level taught by a given teacher viewed the videotapes and the other did not. In this way it was assured that each teacher would teach one class of every possible combination of music achievement level and videotape viewing. The purpose of employing this type of design was to minimize the effect of teacher differences. Table 17 illustrates the assignment to sections to various treatments and teachers.

At the end of each term the ABS-EGM was administered to each section to measure the dependent variable--attitude toward the value of elementary school general music.

Sectioning Procedure

During the first class session of each term the MAT was administered to combined sections of Music 135 at each of the class hours. In most cases, two sections met simultaneously in adjacent rooms at a given class hour. At some class hours only one section met, but never more than two sections met at one time.

At selected class hours students were divided into homogeneous sections, one of high and one of low music achievement. At other class times students were left in

TABLE 17.--Assignment of Sections to Treatments and Teachers.

	Music Achievement Level		
	High	Low	Heterogeneous
Fall Term			
TV	T_1, T_3	T_1, T_2	T_3
No TV	T_4	T_2	T_4
Winter Term			
TV	T_2	T_4	T_4
No TV	T_1, T_2	T_1, T_3	T_3
Spring Term			
TV	T_4	T_3	T_1, T_2
No TV	T_3	T_4	T_1, T_2

TV=Videotape Series T=Teacher

the section for which they had originally enrolled. These sections were assumed to be heterogeneous with respect to music achievement. The selection of which class times to section according to music achievement was made according to the schedules of teachers involved. Sections which met at class hours when no other section met were, of course, automatically selected to be heterogeneous sections.

When the sections were to be assigned according to music achievement, the median of MAT scores or a convenient break in the distribution near the median was used as a

cut-off point. Those students who scored above the cut-off point were assigned to the low section. For each class time the cut-off point was determined according to the distribution of scores for that class time only. This was done in preference to establishing a single cut-off point for use at all class times.

It was felt that in this way equality of class sizes could better be maintained. The fact that cut-off points were not exactly the same is not considered of importance because the differences were slight.

Students were not informed that an experimental study was taking place and care was taken to avoid their realizing that they were being sectioned according to music achievement. All sections of Music 135 were pre-tested, even those not included in the study, in an attempt to avoid any differential treatment. The pretest scores of sections included in the study but not sectioned according to music achievement proved useful as a measure of their heterogeneity.

As part of the pretest administration students were told that pretest scores did not constitute part of their grade for the course (which they did not). It was explained that the pretesting was part of an ongoing process of course improvement (which it was) and was designed to help determine the effectiveness of the course in achieving desired outcomes.

The possibility was considered that if students knew they were being sectioned according to the pretest this would become known to others enrolling in subsequent terms, and they might purposely do poorly in order to get into an "easy" section. The fact that this problem was avoided is attested to by the lack of difference in pretest scores across terms.

As a check on the effectiveness of the sectioning procedure means and standard deviations of each section on MAT were calculated (see Appendix VI). Heterogeneous sections do, in fact, have more within-class variation than do homogeneous sections. Means of high sections are above those of heterogeneous sections and means of low sections are below those of heterogeneous sections. The average of high sections means is 47.5, that of heterogeneous sections means is 38.9, while the average of low section means is 33.0. Low sections consistently have higher standard deviations than do high sections, indicating that they are not as homogeneous. This is due to the fact that scores had more room to spread below the cut-off point than above. In other words, cut-off points were closer to the maximum possible score of sixty than they were to zero. Low sections were more prone to having extreme scores which were unrepresentative of the groups. Nonetheless, variability of low sections was considerably lower than that of heterogeneous sections, so the sectioning procedure was deemed adequate.

Treatment

Classes met five days per week for one hour. Fall term, 1972 sections met for ten weeks. Winter term, 1973 sections met for nine weeks, as did Spring term, 1973 sections. All sections used the same textbook, music listening tape series, and song book. All sections had the same examinations and class project requirement. Teachers were informed of the music achievement levels of their classes and of individuals within the classes. This was not considered a threat to the generalizability of the study because whenever classes are divided in this way teachers are aware of the levels of their various sections.

There is a high level of class interaction in most Music 135 sections because a large portion of class time is devoted to using in music performance the concepts being learned. In addition, each student is required to teach a short music lesson to his or her class. Classes often break up into small project groups. In general, some comradeship usually develops within sections.

The videotape series consists of six taped music classes, each of which is approximately forty minutes in length. The classes are taught by a music specialist. Grade levels of the classes vary among tapes, but all are elementary school classes. The videotapes were made in Dewey Elementary School in Oak Park, Michigan, and are of actual classes in progress. The same teacher appears

with each class and all take place in the music room of the school.

A wide range of activities is represented in the videotaped class sessions, including performing on percussion instruments, singing, listening, creative activities, and responding physically to music. Varied approaches to teaching basic music concepts are demonstrated. Instead of presenting one complete class session each tape is divided into segments of particular interest. Between some class segments a narrator appears on the screen to explain certain concepts and point out procedures to be aware of while viewing the following segment. The tapes are designed to acquaint students with various applications of the material they are encountering in Music 135. More importantly, they afford students a chance to view children in music learning situations.

Presentation of the videotapes was accomplished through Michigan State University's closed-circuit television system. The programs are broadcast on one channel of the system every Thursday from the third week of the term to the eighth week. In the event of a holiday or some other reason for classes not to be in session on a particular Thursday, the tapes were broadcast at an alternate time. The broadcasts were received on black-and-white classroom monitors.

Teachers were instructed to hold discussions of each program after its presentation. In these discussions, which were informally structured, such things as students' reactions to the class sessions, techniques used, and concepts learned were included.

Students in sections which viewed the videotapes were not informed that some sections were not viewing the programs. Likewise, students in sections which did not view the programs were not informed that the programs existed. In sections which did not view the videotapes, normal classroom activities were continued during the broadcast times. In all, the difference in treatment was six sessions of viewing and discussing videotaped elementary music classes, as opposed to continuing with regular classroom procedures.

Data Gathering Procedure

The ABS-EGM was administered to all sections of Music 135 for the three terms during which the experiment took place. Again, this was done in an attempt to avoid any differential treatment of sections involved in the study. Testing took place two days before the final examination for each term. This time was chosen for several reasons. It allowed for a maximum of class time to have been experienced by students before the assessment of their attitudes. It avoided interference of matters having to do with the final examination, which

could have occurred if attitude testing had been done on the day of the course final. It allowed a day to give make-up tests to absentees before the final examination day. Attendance is usually high on the last few days before the final examination.

Students were given a test booklet and a mark sense answer sheet on which to record their responses. It was explained to them that the attitude test was another part of the course improvement program and that it had no effect on their grades. To reinforce this statement, students were instructed not to put their names on the answer sheets. It was felt that they would respond more honestly if they were allowed to do so anonymously.

In order to mark the answer sheets for identification by section number and term, a number was devised which could be written by students in the space provided for student number. The first digit of the number indicates the term of the study--1, 2, or 3. The next two digits indicate the section number--01 through 11. Data from each section are identified with the numbers. For example, the identification number 302 indicates third (Spring) term, section two.

Students were instructed to complete all items, making no omissions. They were told that if the response which they considered best for a particular item did not appear among the response choices, they were to pick the

available choice which most closely approximated it. It was explained that they should not ponder items, but indicate their immediate response. There was no particular time limit for the testing, but most students completed the scale in slightly over ten minutes.

Responses were transferred to computer cards by Evaluation Services, Michigan State University. Individual scores were then computed with the RAVE reliability program discussed in Chapter III.

Data Analysis Procedure

Analysis of variance (ANOVA) employing a 2 x 3 factorial design was chosen for analysis of the data. Both achievement grouping and videotape treatment were considered fixed factors.

Class means on the ABS-EGM were used as the unit of observation. The decision to use class means rather than individual scores as units of observation was made in order to comply with accepted procedure for the correct use of ANOVA. When employing ANOVA certain assumptions must be made concerning the nature of the data to be analyzed. Of particular importance is the assumption of independence of observations. ANOVA is not robust with respect to violation of this assumption. As discussed earlier in this chapter, the nature of Music 135 classes dictates a good deal of interaction among class members. Therefore, observations of individual attitudes toward the

value of elementary school general music cannot legitimately be considered independent, especially as data were gathered within the context of the class.

By treating class means as observations certain sacrifices must be accepted. Any time means are used in place of individual scores in the analysis of data, a good deal of information is lost. All within-group variation is disregarded. In addition, there is a great reduction in degrees of freedom. In this study the total degrees of freedom (N-1) were dropped from 504 to 23. In ANOVA, the greater the degrees of freedom, the lower the F ratio needed to reject the null hypothesis at any given significance level. In other words, the more observations that are included in a study, the smaller the difference between groups can be and still be statistically significant. On the other hand, dropping degrees of freedom makes a test more conservative, meaning that if a significant difference is found when there are few degrees of freedom, the difference is likely to be even more meaningful in practical terms.

Table 18 illustrates the design employed. Class means are the unit of observation.

TABLE 18.--Data Analysis Design--ANOVA.

	Level of Music Achievement					
	L_1 (high)		L_2 (low)		L_3 (heterogeneous)	
Treatment						
T_1	$\bar{x}_{103}$	$\bar{x}_{110}$	$\bar{x}_{104}$	$\bar{x}_{111}$	$\bar{x}_{101}$	$\bar{x}_{211}$
Video-tape	$\bar{x}_{204}$	$\bar{x}_{305}$	$\bar{x}_{209}$	$\bar{x}_{306}$	$\bar{x}_{303}$	$\bar{x}_{304}$
T_2	$\bar{x}_{106}$	$\bar{x}_{202}$	$\bar{x}_{102}$	$\bar{x}_{203}$	$\bar{x}_{108}$	$\bar{x}_{201}$
No Video-tape	$\bar{x}_{207}$	$\bar{x}_{301}$	$\bar{x}_{206}$	$\bar{x}_{302}$	$\bar{x}_{307}$	$\bar{x}_{308}$

(Subscripts are section identification numbers. See p. 90).

A "Multivariate Analysis of Variance" program written by Jeremy Finn at State University of New York at Buffalo was chosen to perform the ANOVA.[1] A significance level of $\alpha = .05$ was chosen for the purposes of this study. This significance level served as the basis for acceptance or rejection of null hypotheses.

It was assumed that if data analysis revealed significant differences of attitude among groups, the differences

[1]Jeremy D. Finn's Multivariance--Univariate Analysis of Variance and Covariance: A FORTRAN IV Program by Jeremy D. Finn, revised for use on the CDC 3600 and CDC 6500 at Michigan State University by David J. Wright, and appearing in Occasional Paper No. 9 of the Office of Research Consultation, School for Advanced Studies, College of Education, Michigan State University, March, 1970.

could be attributed to independent variables employed in the study. Specific main and interaction effects responsible for significant findings can be determined by means of post hoc comparisons. Due to the nature of the sectioning procedure it was assumed that no systematic differences existed among groups before taking the Music 135 course. The only exception was, of course, that lack of difference between high and low groups could not be assumed because of the systematic way in which they were divided.

CHAPTER V

PRESENTATION OF FINDINGS

Data Obtained

After administration of the ABS-EGM and subsequent computation of individual's total scores by the RAVE program, section means were calculated. Since these means were used as units of observation they became the raw data for analysis. Section means for the ABS-EGM are listed in Appendix VI.

For analysis purposes the section means were placed in a 3 x 2 factorial design, as discussed in Chapter IV. The design is presented with obtained means in Table 19. Section means appear as raw scores, while $\bar{x}$ indicates cell mean and σ represents cell standard deviation. Column and row means appear below and to the right of the table. They represent pooled means across levels of music achievement (L_1=high, L_2=low, and L_3=heterogeneous) and across treatments (T_1=videotape treatment, T_2=no videotape treatment).

Analysis of Data

Data were grouped and analyzed according to the design presented in Table 19. Analysis of variance was

TABLE 19.--Obtained Section Means for ABS-EGM in Analysis Design.

	L_1		L_2		L_3		
T_1	120.000	125.777	112.095	114.526	113.840	110.125	
	119.416	113.058	111.700	105.000	118.346	112.166	$\bar{x}$= 114.671
	$\bar{x}$=119.563		$\bar{x}$=110.830		$\bar{x}$=113.619		
	σ=5.20		σ=4.08		σ=3.50		
T_2	115.500	115.684	122.538	115.333	114.166	109.473	
	115.736	111.636	166.555	105.750	115.250	113.473	$\bar{x}$= 114.258
	$\bar{x}$=114.639		$\bar{x}$=115.044		$\bar{x}$=113.090		
	σ=1.00		σ=6.95		σ=2.52		
	$\bar{x}$=117.101		$\bar{x}$=112.937		$\bar{x}$=113.355		

performed using Finn's program. At this point it is appropriate to discuss briefly certain accepted procedures for hypothesis testing with ANOVA. In addition, some features of Finn's program will be explained.

The procedure followed when performing an ANOVA involving multiple independent variables and multiple hypotheses is to examine first for significance among interactions. If the test shows significant interaction effects it is necessary to determine where the significant interaction is occurring. Only then is one justified in testing for main effects.

The significance level which was chosen for the purposes of this study was $=\alpha .05$, as reported in Chapter IV. Output of Finn's program presents the significance level obtained in terms of a probability statement (P=.05, for example). In this case, P means the same as α to the researcher. Alpha (α) represents the probability of a Type I error, or falsely rejecting the null hypothesis. In other words, it is the probability of concluding that samples tested represent populations that are different when, in fact, they do not. The probability statement presented in the output of Finn's program indicates the probability of having obtained the results printed if the populations represented were equal. For example, P=.05 means that if the populations represented were really equal with respect to the variable being tested, the obtained

results would occur only five times in a hundred, due to chance associated with sampling error. In other words, the populations are probably not equal. On the other hand, a large P (.75, for example) indicates that if the populations were equal, the obtained results could easily have occurred (75 times in 100), so they do not necessarily indicate inequality of the populations. To reject the null hypothesis on the basis of these results, then, would mean that the probability of having done so falsely is .75.

The probability statement is a good deal more precise than the practice of setting an alpha level and consulting a table of critical values to see if an obtained F ratio is sufficient for the desired level of significance. Before the advent of computer, assisted research, the use of these tables was the most practical method for determining level of significance. They give critical values of F for varying degrees of freedom at different alpha levels. It would be impossible to have a table for every alpha level, so only certain levels are used. Those most widely used are .05 and .01. The researcher can consult the table and determine whether the obtained F ratio is sufficient for significance at .05 or .01, but cannot determine the eact level of significance. The probability statement, on the other hand, gives the exact level of significance to four decimal places.

It is still accepted procedure to make an <u>a priori</u> decision on a level of significance (α) to be used in accepting or rejecting the null hypothesis. One reason

is that the researcher must consider not only Type I error but Type II error as well. Type II error is accepting the null hypothesis when samples actually represent different populations. As the probability of a Type I error approaches zero, the probability of ever rejecting the null hypothesis also approaches zero. If the alpha level reaches zero the null hypothesis will never be rejected, even if it is false. As the probability of a Type I error decreases, the probability of a Type II error increases. The researcher must be certain that an acceptable balance is maintained.

Discussion of Interaction

This study included four hypotheses concerning interaction of the two independent variables: sectioning according to level of music achievement; and the videotape treatment. Finn's program performed one ANOVA for all interaction effects. All four experimental hypotheses concerning interaction are represented by the one null hypothesis for this ANOVA.

H_o: There is no significant interaction between the videotape treatment and sectioning according to music achievement which affects attitudes measured by ABS-EGM.

The obtained P value indicates that under the null hypothesis the probability of having obtained an F value equal to or greater than the one calculated is .1413. Since it was decided to accept or reject hypotheses at the

TABLE 20.--ANOVA--Interaction Effects.

Source	Degrees of Freedom	Mean Square	F	P
Interaction	2	41.7671	2.1863	.1413
Error	18	19.1040		

.05 level of significance this null hypothesis was accepted. The data obtained do not substantiate any of the experimental hypotheses concerning interaction. These hypotheses will be discussed individually.

> Hypothesis III. Using videotapes of elementary music classes in homogeneous music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in heterogeneous music achievement sections.

For this experimental hypothesis to be substantiated, the difference between homogeneous classes with videotape and those without would have to be significantly greater than the difference between heterogeneous classes with videotape and those without. Figure 1 illustrates results obtained regarding this hypothesis.

There is less than one scale point difference between the average of homogeneous sections with videotape and the average of those without. The same is true for heterogeneous sections. Since the differences are nearly equal it is assumed that no interaction is present, as indicated by the ANOVA results.

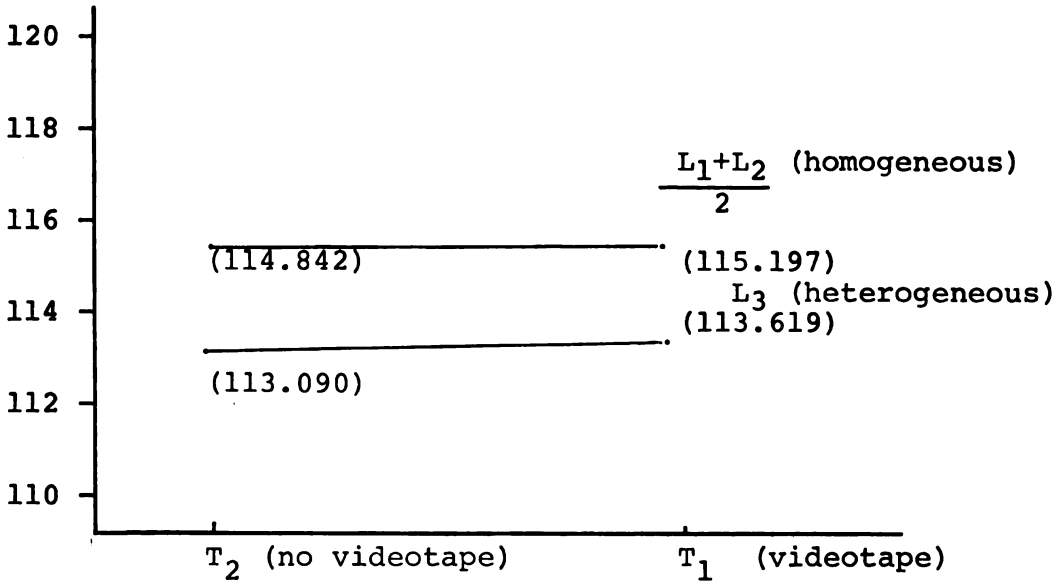

Figure 1.--Homogeneity X Videotape Treatment Interaction.

Hypothesis IV. Using videotapes of elementary music classes in low (homogeneous) music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in high (homogeneous) music achievement sections.

For results to substantiate this hypothesis, the difference between low sections with videotape and those without would have to be significantly greater (in a positive direction) than the difference between high groups with videotape and those without.

High sections with videotape averaged almost five scale points higher than those without. Low sections with videotape averaged over four scale points lower than those without. These results are opposite to those hypothesized.

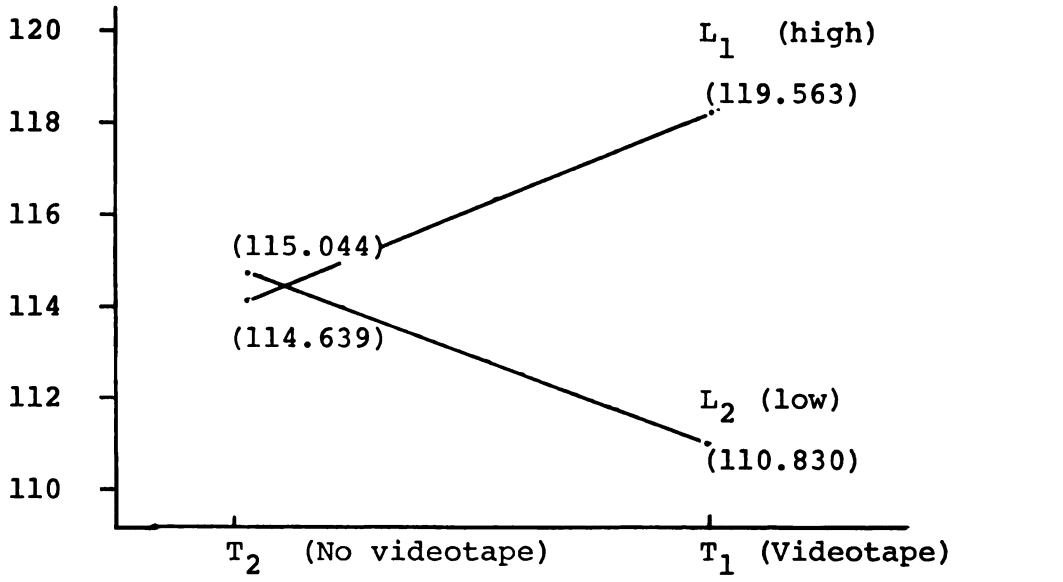

Figure 2.--Achievement Level X Videotape Treatment Interaction.

Upon first consideration this appears to be a sizeable interaction. However, given the large within-cell variance (19.104), differences of this magnitude could easily be due to sampling error. Both differences are approximately equal to the within-cells standard deviation (4.37). Although this interaction graph is consistent with the ANOVA results leading to acceptance of the null hypothesis, it calls for further consideration. If the directionality of the differences was in the direction hypothesized, the possibility of a Type II error could be considered. Even though the direction is opposite to the experimental hypothesis, it is not opposite to the null hypothesis for all interactions, which is non-directional. The

interaction null hypothesis was accepted at the predetermined level of significance ($\alpha = .05$) because the obtained P value was larger (.14). Nonetheless, this P value indicates that if the null hypothesis is true and no interaction is present, results at least as extreme as those obtained would occur only 14 times in 100. The decision to accept the null hypothesis at $\alpha = .05$ will, of course, be upheld and no discussion of "approaching significance" will ensue. However, further investigation of this particular interaction is appropriate for future study.

> Hypothesis V. Using videotapes of elementary music classes in low (homogeneous) music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in sections of heterogeneous (high or low) music achievement.

For this hypothesis to be substantiated, the difference between low sections with videotape and those without would have to be significantly greater than the difference between heterogeneous sections with videotape and those without. Although differences for these two groups are presented in earlier figures, they are isolated for comparison in Figure 3.

Again, this appears to be a sizeable interaction, but could easily be due to sampling error. These results do not substantiate hypothesis V. As with the results illustrated in Figure 2, further investigation is warranted.

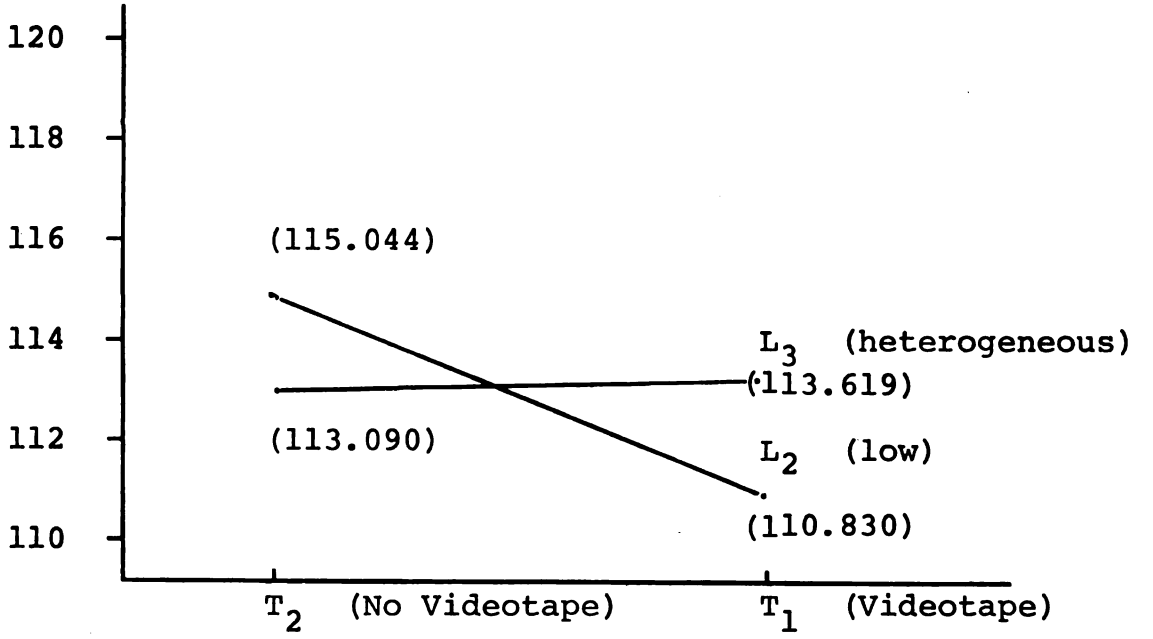

Figure 3.--Achievement Level X Videotape Treatment Interaction.

Hypothesis VI. Using videotapes of elementary music classes in heterogeneous (high and low) music achievement sections will produce more positive change in students' attitudes toward the value of elementary school general music as measured by the ABS-EGM than using such tapes in high (homogeneous) music achievement sections.

For results to substantiate this experimental hypothesis the difference between heterogeneous sections with videotape and those without would have to be significantly greater than the difference between high sections with videotape and those without. Again, previously presented data are isolated for comparison.

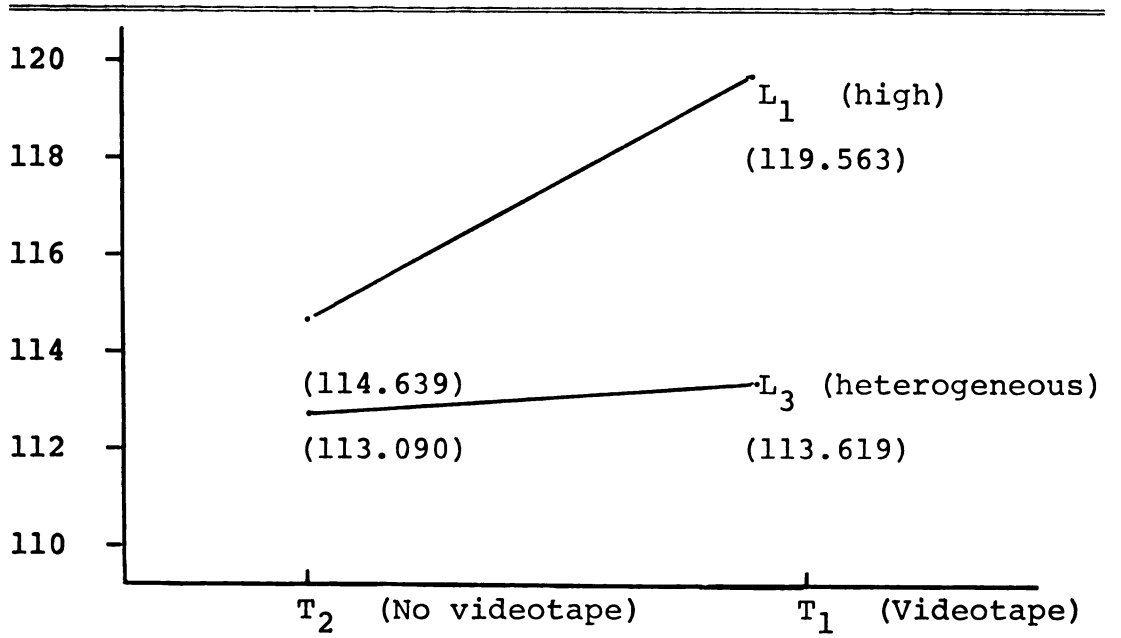

Figure 4.--Achievement Level X Videotape Treatment Interaction.

The videotape had more effect on high sections than on heterogeneous. Again, the differences are small enough to be attributable to sampling error. Hypothesis VI was not substantiated by the results obtained.

Discussion of Main Effects

The two main effects were tested individually in Finn's program. For each of the two experimental hypotheses concerning main effects there is a corresponding null hypothesis for analysis purposes.

> Hypothesis I. Students in sections employing a series of videotapes of elementary music classes will finish the course with more positive attitudes toward the value of elementary school general music as measured by the ABS-EGM than students not employing such tapes.

H_0. There is no significant difference in attitudes measured by the ABS-EGM between sections with videotape treatment and those without.

TABLE 21.--Videotape Treatment Main Effect.

Source	Degrees of Freedom	Mean Square	F	P
Treatment	1	1.0230	.0535	.8197
Error	18	19.1040		

The null hypothesis was accepted. Results indicate that seeing the series of videotapes as presented in this study, had no significant effect on students' attitudes toward the value of elementary school general music.

Hypothesis II. Students in sections that are homogeneous with respect to music achievement will finish the course with more positive attitudes toward the value of elementary school general music as measured by the ABS-EGM than students in sections that are heterogeneous.

H_0. There is no significant difference in attitudes measured by the ABS-EGM between homogeneous sections and heterogeneous sections.

TABLE 22.--ANOVA--Music Achievement Level Main Effects.

Source	Degrees of Freedom	Mean Square	F	P
Levels	2	42.1585	2.2015	.1396
Error	18	19.1040		

The null hypothesis that no significant differences in attitude exist between homogeneous sections and heterogeneous sections was accepted. This particular ANOVA does not yield results pertaining specifically to homogeneity compared to heterogeneity of sections. Instead, it tests for differences across the three levels: Low, high, and heterogeneous. Since no significant difference was found, it can be inferred that no significant difference exists between homogeneous (pooled high and low) and heterogeneous sections. If a significant difference had been found among the three levels, post hoc comparisons would have included comparing pooled high and low sections with heterogeneous sections.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to construct an instrument suitable for measuring attitudes toward the value of elementary school general music. A further purpose was to use this instrument in measuring the effects of two variables concerning music fundamentals classes for Elementary Education majors. These two variables were: sectioning students according to music achievement level; and employing a videotaped series of elementary music classes. Six hypotheses were made about the effects of these variables on students' attitudes toward the value of elementary school general music.

The attitude scale (ABS-EGM) was based upon Guttman's facet theory of attitude scale construction. Scale development procedure included gathering opinions of classroom teachers toward elementary school general music, construction of items, reliability checks, and validity checks.

Item construction was accomplished by facetizing the hypothesized attitude construct, developing a mapping sentence, and deciding on item content. Several revisions of items were made following preliminary administrations.

Reliability was based on Hoyt's internal consistency measure, as performed by RAVE, a subroutine of computer program FORTAP. Validity was determined by the known-group method.

Twenty-four sections of Music 135, a music fundamentals course for Elementary Education majors at Michigan State University, were employed in determining the effects of the independent variables. The ABS-EGM was administered during the final week of the course for three successive terms to measure the dependent variable. Class means were used as units of observation. Data were analyzed using a 2 x 3 factorial design with ANOVA. The level of significance was set at .05. Analysis was performed using the CDC 6500 computer at Michigan State University. The program used was Jeremy Finn's "Multivariate Analysis of Variance."

Findings and Conclusions

The findings of this study are subject to certain limitations. Results obtained with the sample used can be generalized only to the finite population represented--Elementary Education majors at Michigan State University. The series of videotapes used in this study is specific in nature and is not necessarily representative of any other videotape series. The use of any written attitude scale poses certain limitations in that respondents must be relied upon to reply truthfully.

Certain conclusions were drawn, based upon the findings of this study:

1. The ABS-EGM is a suitable instrument for measuring attitudes of Elementary Education majors toward the value of elementary school general music.

2. In music fundamentals classes for Elementary Education majors, placing students in sections of homogeneous music achievement level has no significant effect on their attitudes toward the value of elementary school general music.

3. In music fundamentals classes for Elementary Education majors, using videotapes of elementary music classes has no significant effect on their attitudes toward the value of elementary school general music.

4. After having taken a fundamentals of music course, students with a high level of music achievement do not differ significantly from students with a low level of music achievement, with respect to attitude toward the value of elementary school general music.

5. Viewing videotapes of elementary music classes may have a more positive effect on students in high music achievement sections than on students in low sections, with respect to attitude toward the value of elementary school general music. The results of this study do not indicate a significant difference, but further study is warranted.

Discussion

Although it was concluded that neither sectioning by music achievement level nor using videotaped elementary music classes has any significant effect on the attitudes measured, it is certainly not the recommendation of the investigator that these practices be discontinued. To do so because they were found not to be effective in gaining one desired outcome would be to forfeit any other benefits derived through their use. Furthermore, conclusions based on the results of this study should be accepted only with consideration to the specific nature of the study and of the variables in question.

Among the benefits of using the videotape series, the most obvious is the exposure of students to methods of teaching elementary school music. In addition, seeing the tapes may help students to realize that the concepts they are learning in the music fundamentals course are not merely useless information, but are actually used in the elementary school. There is also the possibility that seeing the videotapes has a positive effect on attitudes other than those considered in this study. Finally, some cognitive gain with respect to course material might be attributable to viewing the videotapes, as the taped class sessions include instruction in some of the same concepts taught in Music 135.

Sectioning according to music achievement level may also afford benefits not considered within the context of this study. Does such sectioning influence attitudes other than those measured? Is cognitive gain in course material affected by this type of sectioning? Further research is needed to answer these questions.

The videotape series used in this study consisted of only six forty-minute sessions. The possibility exists that more sessions or sessions of longer duration would produce greater effects. Not only quantity, but the quality of the series must be considered. One premise discussed in Chapter I was that viewing children in successful musical experiences might have a positive effect on attitudes toward the value of elementary school general music. Although the taped sessions were judged successful by the Music Education faculty at Michigan State University, perhaps they were not sufficiently successful to produce the expected effects. Assuming there is a continuum of successfulness, how successful do viewed musical experiences have to be to have a significant effect on attitude? All of the videotaped classes were taught by the same instructor. Perhaps a series of videotaped classes taught by different teachers would have less potential for boring viewers, thus possibly having a more positive effect on attitude.

Attitudes were measured within the context of the music course, indicating short-term effects only. Preparations for a follow-up measurement are now in progress. The direct effect of variables being considered was the only measurement possible within the context of this study. A worthwhile undertaking would be the investigation of indirect effects which might take longer to manifest themselves.

A major limitation of this study, as stated in Chapter I, is that attitudes which have taken years to form may not be alterable by a ten-week classroom experience. In this study, actual attitude change was not measured. Only differences in attitude among experimental and control groups were considered. Any differences in attitude were considered differences in change. This could be done because there were assumed to be no systematic differences between groups at the beginning of the study. It would be beneficial to measure actual change in attitude by administering both pre- and post-tests. It is possible to do this and still allow students to respond anonymously. Variables such as birthdate, place of birth, eye color, and shoe size can be included as test items, and allow pretests to be matched with posttests of the same subjects. On the basis of the results of this study, it can be seen that, in general, students indicated a fairly positive attitude toward the value of elementary school general

music, and that there was no significant difference in attitude among groups receiving different treatments. What is impossible to determine using these data is whether the lack of difference results from equal change of the groups, or from no change of any group. It can also be seen that attitudes in Spring term sections are generally somewhat less positive than in corresponding sections of other terms. With the use of pre- and post-tests it could be determined whether there was less attitude change in Spring term sections, or whether students in these sections started the course with less positive attitudes. In either case, the fact that students are usually less motivated at the end of the academic year is probably at least partially responsible for the less positive attitudes in Spring term sections.

The interaction between videotape viewing and level of music achievement is an interesting consideration. Why, for example, did high music achievement sections seem to have more positive average attitudes with the videotape treatment than without, while low sections had more positive average attitudes without the videotapes than with them? One possible explanation is that the extra time devoted to practicing musical skills in sections not using the videotapes had a more positive effect on the attitudes of low achievers than did the videotapes. Perhaps gaining sufficient skills to feel comfortable with

music has more impact upon low achievers' attitudes than viewing others in successful experiences. An alternate explanation is that students in low achievement sections who did not view the videotapes in their classes, thus spending more time on skills, actually saw the videotapes at some other time. This is unlikely, but not impossible, since the videotapes were broadcast over the campus closed-circuit television system and could be received on monitors in any building. If this was the case, those students received the benefits of both the videotape series and the extra skills practice time.

If further study should indicate that an interaction between music achievement level and videotape viewing does exist, the information could be used to manipulate course content for the enhancement of both high and low music achievers' attitudes. If a significant interaction was in the direction indicated by the results of this study, for example, it would seem beneficial to use videotapes in high music achievement sections and to continue regular class activities in lower sections.

Attitudes are extremely difficult to understand, or even to define. In this study only two of the many factors affecting attitude were investigated. The related literature indicates not only that classroom teachers' attitudes are important to the success of music programs, but that music educators recognize this importance. If

this is true, it is the responsibility of music educators to continue seeking effective methods of promoting positive attitudes.

Suggestions for Further Research

1. Investigation of possible interaction between level of music achievement and viewing videotapes of elementary music classes seems warranted.

2. The use of pre- and post-tests of attitude with matching variables included as test items would allow the investigation of direct attitude change. This technique could be used beneficially in many experimental and quasi-experimental settings.

3. As the population represented in this study was finite, replication with other populations represented would be of value.

4. As the videotape series used in this study was not necessarily representative of any other series, replication employing other videotapes seems of value.

5. This study dealt with only two factors of possible influence to attitudes toward the value of elementary school general music. Investigation of other factors affecting these attitudes is needed.

6. Guttman's facet theory proved to be easily usable as well as beneficial in the development of the ABS-EGM. Its use is recommended for developing other scales of attitude toward music.

7. The ABS-EGM was designed only to measure the attitudes of prospective teachers, rather than practicing teachers. Plans are being made for its further development and use. Two possible applications are being considered: use as a pre- and post-test for in-service training programs to determine the effects of the programs on teachers' attitudes toward music; and use by elementary school music teachers or music supervisors to determine the attitudes of classroom teachers and administrators toward the value of elementary school general music.

8. It would be beneficial to determine the cognitive effects of both the use of videotaped elementary music classes and sectioning according to music achievement level in music fundamentals classes for prospective elementary classroom teachers.

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APPENDICES

APPENDIX I

MAPPING SENTENCE

MAPPING SENTENCE*

APPENDIX I

concern for music { (F) TYPE: performance, listening, cognitive, creative } activities in the { (G) LEVEL: K-1, 2-3, 4-5-6 } elementary curriculum as taught

by { (H) TEACHER: classroom, specialist, combination } in { (I) PLACE: classroom, special room } and requiring { (J) FACILITIES: special insts., piano, record player, tape recorder, movie proj. } and fulfilling

{ (K) GENERAL STUDENT NEEDS: relaxation, means of expression, break from academics, emotional stimulation, self-discipline, fun time, emotional outlet, contact with a humanity, group activity, uncover unknown talents, public performance, creative outlet, success, bring out shy students } and developing { (L) SPECIFIC ABILITIES: sense of pitch, sense of timbre, sense of loudness, enjoyment skills, awareness of instruments, awareness of various kinds of music, aesthetic capacities, understanding of music in cultures, appreciation of musical organization, critical listening, listening concentration, group cooperation, word rhyming, coordination through rhythm }

but with { (M) DRAWBACKS: no practical value (employment), takes time from "basic" skill areas, penalizes child with no interest, embarrasses child with no talent, "fun and games", not instructive } and costing { (N) COSTS: time in hrs./wk., monetary }

* Taken directly from teacher statements. First five facets (joint struction) do not appear here. For item construction, any facet or combination of facets can be used. Any or all listings in a facet can be dealt with.

APPENDIX II

QUESTIONNAIRE

APPENDIX II

Using brief statements, give as many reasons as you can why music should or should not be included in your elementary curriculum. For example:

1. Music should not be included because math is needed more.
2. Music should be included because it helps develop motor skills.

Do not put your name on this paper. Thank you for your cooperation.

APPENDIX III

REPRESENTATIVE QUESTIONNAIRE STATEMENTS

APPENDIX III

REPRESENTATIVE QUESTIONNAIRE STATEMENTS

"Number 2 plus God doesn't give some teachers ability to carry a tune (not even in a bushel basket) somebody has to HELP."

"Should be included because it contributes to group cooperation and participation."

"I feel that 1 1/2 hours (5th grade) does take a little too much time from the basic subjects. I would prefer 1 hour a week rather than 1 1/2 hours."

"Music should not replace a basic skill area."

"Music should not penalize the child with no interest or talent."

"Music should be elective after 2 years."

"An elementary curriculum should train students in the basic skills needed early in life, such as math & English. Music is more an extra curricular activity and should be offered in high school as an elective."

"It can be used as a means of enriching reading and social studies."

"Music should be included because it develops concentration powers."

"Music should be included because it develops self-discipline."

"Values of learning cooperation through working with others on music skills."

"It develops habits of listening . . ."

"It develops an appreciationfor music and rhythm."

"It helps to rid one of pent-up emotions.

". . . children (the younger, the better) need all kinds of successful experiences in this area."

"Music is a media through which children can express themselves, regardless of their intellectual or musical capability."

"It can become a sense of emotional release or stimulation."

"Music should not be included because it is not concerned with real life problems, does not serve as preparation for employment."

"Develops awareness of different types of music (folk songs, classics, etc.)."

"Nice break from academic work."

"Music is a delightful way to practice listening skills."

"Music is a useful took in bringing the withdrawn child from his shell."

APPENDIX IV

ABS-EGM, FORM I

APPENDIX IV

ABS-EGM, Form I

The following statements concern general music in the elementary school. In this section you are asked to indicate what you think elementary teachers actually believe with regard to each statement. For example, if you think most elementary teachers would strongly agree with the statement, indicate the response "strongly agree." Be sure to check the possible responses for each item, as they are not always in the same order.

1. It is important for children to develop "critical listening skills by having elementary school music classes.

   Elementary teachers would:
   1. Strongly disagree
   2. Disagree
   3. Agree
   4. Strongly agree

2. Children should have classes in which they are made aware of the various kinds of music.
   1. Strongly disagree
   2. Disagree
   3. Agree
   4. Strongly agree

3. Social studies classes are sufficient for teaching children the relationship of music to various cultures.

   Elementary teachers would:
   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

4. Rather than use music activities to teach group cooperation, it is better to rely on team sports and games.

   Elementary teachers would:
   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

5. It is important to develop "enjoyment skills" through elementary school music.

   Elementary teachers would:
   1. Strongly disagree
   2. Disagree
   3. Agree
   4. Strongly agree

6. Instead of having music classes to provide a break from academic work, just have recess.

   Elementary teachers would:
   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

7. Music in the elementary school can provide a valuable means of expression for the child.

   Elementary teachers would:
   1. Strongly disagree
   2. Disagree
   3. Agree
   4. Strongly agree

8. Elementary school music helps "bring out" the shy student.

   Elementary teachers would:
   1. Strongly disagree
   2. Disagree
   3. Agree
   4. Strongly agree

9. Classroom music aids the elementary students with self-discipline.

   Elementary teachers woudl:
   1. Strongly disagree
   2. Disagree
   3. Agree
   4. Strongly agree

10. Everyone would benefit from the chance to perform before others which is provided by school music activities.

    Elementary teachers would:
    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

11. Music classes are not worth the time they take away from basic skill areas (math, reading, etc.)

    Elementary teachers would:
    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

12. The child with no interest in music should not be penalized by being forced to have music classes.

    Elementary teachers woudl:
    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

13. The fact that music has little practical (employment) potential lessens its value as a school subject.

    Elementary teachers would:
    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

14. The child with little or no musical talent should not be caused the embarrassment of taking a music class.

    Elementary teachier would:
    1. Stronly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

15. Music classes in the elementary school are usually supervised "fun and games," rather than instructional sessions.

    Elementary teachers would:
    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

16. All things considered, an hour a week is all that should be allotted to music.

    Elementary teachers would:
    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

17. The cost-per-student of elementary school music should be at least equal to the cost-per-student of an academic subject.

    Elementary teachers would:
    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

18. At least two or three hours a week for music should be insisted upon.

    Elementary teachers would:
    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

19. Considering the special expenses involved in music programs, a higher cost-per-student than that of an academic class is acceptable.

    Elementary teachers would:
    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

20. It would be nice to have four or five hours a week for music classes.

    Elementary teachers would:
    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

In this section, you are to indicate what you would do if you were in a position of authority in an elementary school. Be sure to check the item responses, as they are not always in the same order.

If I were in charge:

21. I would stress the importance of music classes for developing critical listening skills.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

22. I would make sure that children had classes in which they were made aware of the various kinds of music.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

23. I would rely on Social Studies classes for teaching the relationship of music to various cultures, rathern than have music classes do it.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

24. I would rely on team sports and games to teach group cooperation, rather than use music activities.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

25. I would stress the use of music classes to develop enjoyment skills.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

If I were in charge:

26. I would rely on recess to provide children with a break from academic work, rather than have music classes do it.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

27. I would stress music in the school as a valuable means of expression for the child.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

28. I would stress the use of music to help "bring out" shy students.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

29. I would stress the importance of music classes in helping the child develop self-discipline.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

30. I would make sure that all students had the chance to perform before others, by providing school music activities.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

31. I would not include music if it cut down on the time devoted to basic skill areas (math, reading, etc.).

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

If I were in charge:

32. I would not force the child with no interest in music to have music classes.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

33. I would question the value of music as a school subject, as it has little practical (employment) potential.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

34. I would not cuase the child with little or no musical talent the embarrassment of taking a music class.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

35. I would view time spent in music classes as "fun and games," rather than instructional.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

36. I would not allow more than an hour a week for music.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

37. I would spend at least as much per student for music as for an academic subject.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

If I were in charge:

38. I would provide at least two or three hours a week for music.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

39. Considering the special expenses involved, I would allow more money per student for music than for an academic class.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

40. I would try to allow four or five hours a wekk for music.

    1. Strongly disagree
    2. Disagree
    3. Agree
    4. Strongly agree

This section concerns actual feelings that you yourself have about elementary general music.

On the following items, indicate how you feel:

41. When I know elementary music classes are being provided for the purpose of developing critical listening skills, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

42. When I know children have classes in which they are made aware of the various kinds of music, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

43. When I know that Social Studies classes are the only classes in which children are taught the relationship of music to various cultures, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

44. When I know that music is being used to help teach group cooperation, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

45. When I know that music is being taught to help devleop enjoyment skills, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

46. When I know that music is used to help provide a break from academic work, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

47. When I know that music is being used to provide the child with a means of expression, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

48. When I know that music classes are being used to help "bring out" shy children, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

49. When I know that music classes are being used to aid children in developing self-discipline, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

50. When I know that the chance to perform before others is being provided by music classes, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

51. When I know that basic skill areas are being cut back to provide time for music classes, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

52. When I know that children with no interest in music are being given music classes, it makes me feel:

1. Very bad
2. Bad
3. Good
4. Very good

53. When I know that music is being cut back because it has little practical (employment) value, it makes me feel:

1. Very good
2. Good
3. Bad
4. Very bad

54. When I know that children with little or no musical talent are being given music classes, it makes me feel:

1. Very bad
2. Bad
3. Good
4. Very good

55. When someone says "Music classes are just fun and games," it makes me feel:

1. Very good
2. Good
3. Bad
4. Very bad

56. When I know that no more than an hour a week is devoted to music, it makes me feel:

1. Very good
2. Good
3. Bad
4. Very bad

57. When I know that at least as much (per student) is being spent on music programs as on academic programs, it makes me feel:

1. Very bad
2. Bad
3. Good
4. Very good

58. When I know that at least two or three hours a week are devoted to music, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

59. When I know that more (per student) is being spent on a music program than on an academic program, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

60. When I know that four or five hours a wekk are devoted to music, it makes me feel:

    1. Very bad
    2. Bad
    3. Good
    4. Very good

APPENDIX V

ABS-EGM

APPENDIX V

ABS-EGM

The following statements concern general music in the elementary school. In this section you are asked to indicate what you would do if you were in a position of authority in an elementary school.

If I were in charge:

1. I would make sure that children had classes in which they were made aware of the various kinds of music.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

2. I would stress the importance of music classes for developing the abiltiy to listen attentively.

    1. Storngly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

3. I would rely on Social Studies classes for teaching the relationship of music to various cultures, rather than have music classes do it.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

4. I would rely on team sports and games to teach group cooperation, rather than use music activities.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

5. I would stress the importance of music classes in developing enjoyment skills.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

If I were in charge:

6. I would rely on recess to provide children with a break from academic work, rather than have music classes do it.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

7. I would stress music in the school as a valuable means of expression for the child.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

8. I would stress the use of music to help "bring out" shy students.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

9. I would stress the importance of music classes in helping the child develop self-discipline.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

10. I would make sure that all students had the chance to perform before others, by providing school music activities.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

11. I would not include music if it cut down on the time devoted to basic skill areas (math, reading, etc.).

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

If I were in charge:

12. I would not give music classes to the child with no interest.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

13. I would question the avlue of music as a school subject, as it has little practical (employment) potential.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

14. I would not cause the child with little or no musical talent the embarrassment of taking a music class.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

15. I would view time spent in music classes as "fun and games," rather than instructional.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

16. I would not allow more than an hour a week for music.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

17. I would spent at least as much per student for music as for an academic subject.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

If I were in charge:

18. I would provide at least two or three hours a week for music.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

19. Considering the special expenses involved, I would allow more money per student for music than for some academic classes.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

20. I would try to allow four or five hours a week for music.
    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

This section concerns actual feelings that you yourself have about elementary general music.

On the following items, indicate how you feel:

21. When I know children have classes in which they are made aware of the various kinds of music, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

22. When I know that elementary music classes are being provided, partially for the purpose of developing the ability to listen attentively, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

23. When I know that Social Studies classes are the only classes in which children are taught the relationship of music to various cultures, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

24. When I know that music is being used to help teach group cooperation, it makes me feel:

    1. Very good
    2. Good
    3. Gad
    4. Very bad

25. When I know that music classes are being provided to help develop enjoyment skills, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

26. When I know that music is used to help provide a break from academic work, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

27. When I know that music is being used to provide the child with a means of expression, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

28. When I know that music classes are being used to help "bring out" shy children, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

29. When I know that music classes are being used to aid children in developing self-discipline, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

30. When I know that the chance to perform before others is being provided by music classes, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

31. When I know that basic skill areas (math, reading, etc.) are being cut back to provide time for music classes, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

32. When I know that children with no interest in music are being given music classes, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

33. When I know that music is being cut back because it has little practical (employment) value, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

34. When I know that children with little or no musical talent are being given music classes, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

35. When someone says "Music classes are just fun and games," it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

36. When I know that no more than an hour a week is devoted to music, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

37. When I know that at least as much (per student) is being spent on music programs as on academic programs, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

38. When I know that at least two or three hours a week are devoted to music, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

39. When I know that more (per student) is being spent on a music program than on an academic program, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

40. When I know that four or five hours a week are devoted to music, it makes me feel:

    1. Very good
    2. Good
    3. Bad
    4. Very bad

41. I think that elementary general music should be taught by:

    1. The classroom teacher
    2. A music specialist
    3. The classroom teacher, with a music specialist as consultant
    4. Both the classroom teacher and a music specialist, sharing the teaching

The next four items concern information about yourself.

42. Age:

    1. Under 20
    2. 20-24
    3. 25-30
    4. Over 30

43. Class:

    1. Freshman
    2. Sophomore
    3. Junior
    4. Senior or graduate student

44. Years of music performance experience, including school groups, church choir, piano lessons, etc.

    1. None
    2. Under 5 years
    3. 5-10 years
    4. Over 10 years

45. Teaching experience:

    1. Have not taught yet
    2. Have student taught only
    3. Have taught for under 5 years
    4. Have taught for 5 years or more

APPENDIX VI

CRITERION SCORES OF SECTIONS

APPENDIX VI

CRITERION SCORES OF SECTIONS

Section	N	MAT $\bar{x}$	MAT σ	Teacher	Level	ABS-EGM $\bar{x}$
101	25	36.2	10.75	3	mix	113.840
102	26	38.6	4.92	2	lo	122.538
103	24	47.9	3.97	1	hi	120.000
104	21	31.2	6.35	2	lo	112.095
106	22	47.3	3.34	4	hi	115.500
108	24	39.7	8.81	4	mix	114.166
110	24	48.1	3.01	3	hi	119.416
111	20	30.9	7.29	1	lo	111.700
201	20	45.2	7.55	3	mix	115.250
202	19	49.9	3.02	2	hi	115.736
203	19	38.5	7.17	1	lo	116.555
204	18	46.1	3.86	2	hi	125.777
206	18	32.7	6.66	3	lo	115.333
207	19	45.3	3.70	1	hi	115.684
209	19	30.4	4.91	4	lo	114.526
211	26	39.8	9.00	4	mix	118.346
301	22	49.8	4.57	3	hi	111.636
302	16	30.6	6.97	4	lo	105.750
303	24	38.7	9.42	2	mix	110.125
304	24	40.8	10.12	1	mix	112.166
305	17	45.4	4.74	4	hi	113.058
306	20	31.0	6.51	3	lo	105.000
307	19	35.3	9.78	2	mix	109.473
308	19	35.37	8.60	1	mix	113.473

APPENDIX VII

SECTION CHARACTERISTICS

APPENDIX VII-A

AGE

APPENDIX VII-A

SECTION CHARACTERISTICS: AGE

Sec.	N	Under 20	20-24	25-30	30+		
103	24	18	6	0	0	In All Hi Sections N=165	
106	22	9	12	0	1	Under 20 108 (65%)	
110	24	17	5	1	1	20-24 52 (32%)	
202	19	10	9	0	0	25-30 3 (2%)	
204	18	13	5	0	0	Over 30 2 (1%)	
207	19	14	4	1	0		
301	22	17	4	1	0		
305	17	10	7	0	0		In All Homo. Sections N=324
102	26	18	7	1	0	In All Low Sections N=159	Under 20 187 (58%)
104	21	11	6	3	1	Under 20 79 (50%)	20-24 115 (35%)
111	20	10	9	1	0	20-24 63 (40%)	25-30 14 (4%)
203	19	13	6	0	0	25-30 11 (7%)	Over 30 8 (3%)
206	18	8	8	1	1	Over 30 6 (3&)	
209	19	9	6	2	2		
302	16	7	7	0	2		
306	20	3	14	3	0		
101	25	13	11	1	0	In All Hetero. Sections N=181	
108	24	9	13	2	0	Under 20 78 (43%)	
201	20	12	8	0	0	20-24 93 (51%)	
211	26	11	13	2	0	25-30 9 (5%)	
303	24	5	19	0	0	Over 30 1 (1%)	
304	24	11	11	1	1		
307	19	9	10	0	0		
308	19	8	8	3	0		

APPENDIX VII-B

CLASS

APPENDIX VII-B

SECTION CHARACTERISTICS: CLASS

Sec.	N	Fresh-Men	Sopho-mores	Juniors	Seniors
103	24	9	9	5	1
106	22	5	6	8	3
110	24	16	1	2	5
202	19	9	2	5	3
204	18	11	5	2	0
207	19	12	2	2	3
301	22	10	7	3	2
305	17	7	6	2	2
102	26	14	3	7	2
104	21	6	5	7	2
111	20	8	3	2	7
203	19	12	1	4	1
206	18	8	2	7	2
209	19	7	3	5	4
302	16	5	2	4	5
306	20	2	2	9	7
101	25	8	5	11	1
108	24	4	4	9	7
201	20	6	7	3	4
211	26	9	5	7	5
303	24	2	6	7	9
304	24	8	8	4	4
307	19	8	2	6	3
308	19	8	0	5	6

In All Hi Sections N=165

Fresh. 79 (48%)

Soph. 38 (22%)

Juniors 29 (18%)

Seniors 19 (12%)

In All Low Sect. N=159

Fresh. 62 (39%)

Soph. 21 (14%)

Juniors 45 (28%)

Seniors 30 (19%)

In All Homo. Sections N=324

Fresh. 141 (44%)

Soph. 38 (22%)

Juniors 74 (23%)

Seniors 49 (15%)

In All Hetero. Sections N=181

Fresh. 53 (29%)

Soph. 37 (20%)

Juniors 52 (29%)

Seniors 39 (22%)

APPENDIX VII-C

YEARS OF MUSIC EXPERIENCE

APPENDIX VII-C

SECTION CHARACTERISTICS: YEARS OF MUSIC EXPERIENCE

Sec.	N	None	Under 5	5 to 10	Above 10
103	14	2	6	11	5
106	22	3	3	10	6
110	24	3	6	10	5
202	19	2	6	10	1
204	18	2	6	8	2
207	19	2	8	8	1
301	22	3	5	7	7
305	17	1	7	9	0
102	26	6	12	8	0
104	21	5	8	6	2
111	20	9	8	3	0
203	19	6	6	5	2
206	18	7	6	4	1
209	19	10	8	0	1
302	16	6	7	3	0
306	20	9	10	1	0
101	25	5	11	6	3
108	24	6	7	6	5
201	20	5	5	6	4
211	26	6	13	5	2
303	24	3	14	5	2
304	24	8	5	9	2
307	19	9	7	2	1
308	19	5	9	4	1

In All Hi Sections N=165

None 18 (12%)

Under 5 47 (28%)

5 to 10 73 (44%)

Above 10 27 (16%)

In All Low Sections N=159

None 58 (36%)

Under 5 65 (41%)

5 to 10 30 (19%)

Above 10 6 (4%)

In All Hetero. Sections N=181

None 47 (26%)

Under 5 71 (39%)

5 to 10 43 (24%)

Above 10 20 (11%)

In All Homo. Sections N=324

None 76 (35%)

Under 5 112 (32%)

5 to 10 103 (32%)

Above 10 33 (10%)

APPENDIX VII-D

YEARS OF TEACHING EXPERIENCE

APPENDIX VII-D

SECTION CHARACTERISTICS: YEARS OF TEACHING EXPERIENCE

Sec.	N	None	Student Taught	Under 5	Over 5
103	24	15	6	3	0
106	22	16	5	1	0
110	24	19	4	1	0
202	19	16	1	1	1
204	18	16	2	0	0
207	19	15	3	1	0
301	22	17	5	0	0
305	17	12	4	1	0
102	26	21	3	2	0
104	21	15	4	2	0
111	20	12	6	2	0
203	19	17	2	0	0
206	18	15	3	0	0
209	19	18	1	0	0
302	16	12	4	0	0
306	20	10	10	0	0
101	25	24	0	1	0
108	24	8	11	5	0
201	20	13	7	0	0
211	26	19	6	1	0
303	24	12	12	0	0
304	24	15	7	2	0
307	19	13	4	2	0
308	19	11	8	2	0

In All Hi Sections
N=165
None 126 (76%)
ST 30 (18%)
Under 5 8 (5%)
Over 5 1 (1%)

In All Homo. Sections
N= 324
None 246 (76%)
ST 63 (20%)
Under 5 14 (4%)
Over 5 1 (.3%)

In All Low Sections
N=159
None 120 (75%)
ST 33 (21%)
Under 5 6 (4%)
Over 5 0 (0%)

In All Hetero. Sections
N=181
None 115 (64%)
ST 55 (30%)
Under 5 12 (6%)
Over 5 0 (0%)